Part II: P/W Directory of Metals Distributors, Pages 15-23

Purchasing Week

McGRAW-HILL'S NATIONAL NEWSPAPER OF PURCHASING

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How Freedom Fared in 1961

By DEXTER M. KEEZER

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Freedom House has favored me with a copy of its Public Affairs Committee's year-end audit of how freedom has fared around the world in 1961.

I am glad to have it for two reasons. One is that it serves as a reminder that freedom is not a thing to be taken for granted, that being blessed by any substantial measure of it always involves vigilance and usually struggle. The other reason is that I find the audit, or balance sheet as the committee calls it, a well turned out and illuminating document.

I think that the committee would actually be hard put to it to substantiate with complete factual force its over-all conclusion that round-the-world 1961 "registers a net loss for the cause of freedom." We haven't the foggiest notion of what has been going on, in terms of freedom or much of anything else, in vast reaches where vast masses of population are located. But it certainly seems true that overseas, where there has been reporting, the banners of freedom have been given much more of a shellacking than a shining in 1961.

Wishful Thinking on Home Front

Also, I am inclined to think that the committee leaned over a bit on the wishful thinking side in finding that "the picture of the home front reveals a net gain for freedom," largely through liberating accomplishments by the Kennedy Administration. Freedom House was founded 20 years ago with a Republican, Wendell Willkie, as its principal patron saint, but it is my impression that its distinguished roster of trustees, dedicated to the aim and aspiration of a free society, could not currently be found following very closely the political leadership of Mr. Willkie's political heirs and assigns. However, I would so much like to believe that freedom has been strengthened on the home front this year, that I am probably inclined to be tender toward a bit of political bias that may be needed to reach that conclusion, as well as the committee's conclusion that the Kennedy Administration has done much to shore up our bastions of freedom in the field of foreign affairs.

However, about one crucial aspect of the cause of freedom in the United States which has certainly been much in the realm of public discussion in 1961, the Freedom House Committee is completely and strangely silent. This is the question of whether or not the Kennedy Administration has, as has been very widely contended, an antibusiness bias.

Business System Is Bulwark of Freedom

A basic fact is that in the United States the business system is the greatest single bulwark of our social and political freedom. It acquires this status by virtue of the simple fact that it disperses power—in well over 4-million separate establishments—and thus stands athwart of that centralization of power which is the death of freedom.

The business system has other strengths. Thus far it has proved to be the most productive system ever devised or, I think it

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Panorama

- **Improvements** in materials and processes add up to better products. See Product Perspective on page 26 for latest technical developments.

- **Better Tax Break** is due on depreciation allowances. Washington Perspective (p. 8) tells of government plans for more liberal write-offs.

- **Overhead Cost Spiral** has roots in growing army of white collar workers. The story on page 9 plots the upward trend of salaries.

Economic Pickup Seen Boosting Cost of Loans

New York—Most financial experts expect borrowing charges for inventory expansion and capital equipment to start going up soon as businesses add to their stocks. Bank loan officers, economists, and Wall Streeters queried by PURCHASING WEEK were practically unanimous in anticipating higher interest rates on commercial paper, probably in February or March.

"Up to now," observed one New York bank economist, "there has been little impact on bank interest rates for the de-

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FROSTY RUBBER: Inserts for Clevite Harris bushings are frozen, tumbled to remove 'flash.'

Clevite Harris Claims Better Way to Control Rubber Product Quality

Milan, Ohio—Clevite Harris Products, Inc., has developed a method for measuring the dynamic properties of vulcanized rubber. The procedure is suited for specification of rubber products as well as for factory control of compounds and products.

The company has applied the method to develop a prelubricated rubber bearing, called Clevebloc, believed to be the first practical product of its kind. Initial Clevebloc application will be as idler arm bushings in the steering systems of 1962 Ramblers.

The device consists of an outer steel tube that slips over rubber

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NAPA Pro-D Campaign Starting to Show Results

New York—First semester results are nearly in from purchasing's first major coordinated drive for professional development. Estimates of its effectiveness stress these points:

- Pro-D programing that concentrates on "basics" produces the best measurable results.
- "Local color" curricula at seminars and workshops also excite interest because they directly serve the needs of area industry, e.g., subcontracting techniques on the West Coast where government contracting is highly concentrated.

According to NAPA district

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Foreign Steel Eyeing U. S.

New York—Foreign steel producers are eyeing the U. S. market to see if they can cash in on the current inventory buildup here.

But they have their work cut out for them. Steel importers in the U. S. are still divided on the question of how successful the new sales push by foreign producers will be.

However, in areas where they do have a price advantage the

(*Turn to page* 31, *column* 2)

Short Inventories Turning P.A.'s Thoughts to Weather Problems

Abundance of Forecasting Assistance Available, But Long-Range Predictions Not Too Accurate

New York—This is the season when an annual occupational hazard for which there's no remedy in the textbooks—the weather—begins to confront the P.A. with increasing urgency.

Last week Chicago had freezing blasts, New England had snow, New York had slush, but Texas saw clear skies for the most part. Weather forecasters say the nation's weather map this week also will look like a roulette wheel gone haywire.

How much can you plan ahead on the weather in these days of close-to-the-vest supplies? In a nutshell, this is what you can count on right now:

- Short-range forecasts (1-2 days) are pretty good.
- Long-range forecasts (5-30 days) are less accurate but better than nothing although they often suffer from too much stretching.
- You can get more private and public assistance than ever before in peering into the meteorological future. And you may need it as rising production schedules crowd still thin-margin inventories (see story below) and order lead times lengthen with rising demand.

The U. S. Weather Bureau pro-

(*Turn to page* 32, *column* 2)

Price Trend Firming As Business Activity Hits Accelerated Pace

New York—A year-end flurry of industrial price increases signals the start of a drive toward higher profit margins. Suppliers, reacting to increased demand paced by an accelerating economy, have posted higher tags on a wide range of industrial products. Other signs, such as the upturn of the PURCHASING WEEK Industrial Wholesale Price Index, point to firmer prices in the first quarter of 1962.

The picture is still spotty, but here are the latest signs:

- Construction equipment prices were raised by Chain Belt Co. last Friday, following similar boosts by Koehring Co. International Harvester and Deere & Co. previously had paced the market by raising farm equipment prices (see page 3).
- Increased demand already has brought higher quotes for paper bags, gasoline, zinc, and industrial sugar. Industry sources are speculating that other paper products prices will rise in February or March.
- Despite many ups and downs in chemical prices, recent increases in ethylene, propylene

(*Turn to page* 4, *column* 3)

Inventories Rising Slowly

Washington — The Commerce Dept.'s latest look at manufacturers' inventory planning indicates continued cautious building through the next three months. But it's also significant to note that the new survey of businessmen's inventory intentions, on which statistical details were released last week, did not indicate the extent to which steel hedge-buying will be a factor over the next three months.

The quarterly survey, which also includes sales expectations,

(*Turn to page* 4, *column* 2)

Purchasing Week's

Purchasing Perspective

Many businessmen are viewing 1962's glamorous prospects with mixed emotions. On one hand, business appears poised to take off on what most economists assure us will be its best year in history. On the other hand, purchasing men and other industrial managers still are fretting about prices, inventories, and quality.

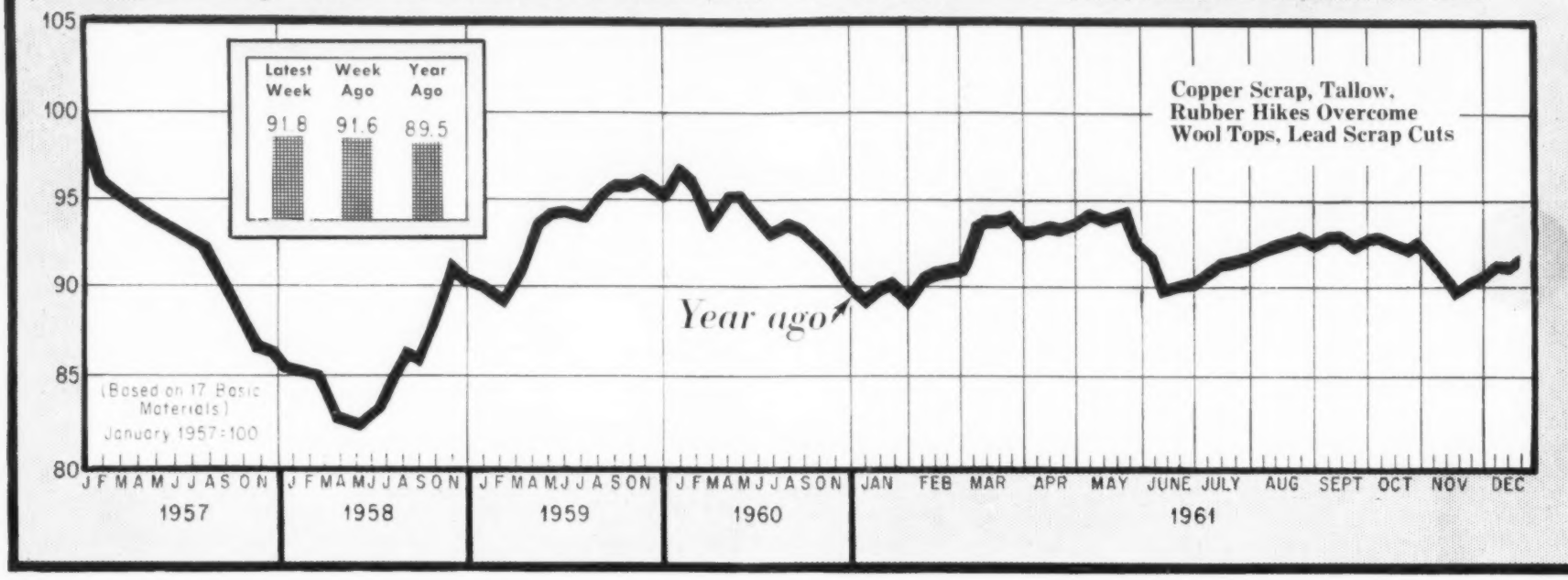
Thus, purchasing executives in all sections of the country are putting continued, if not renewed, emphasis on value analysis projects and strict quality and cost control. So far the lid has remained on inventories except where increased sales have compelled more expansive ordering. And so far most of the steel stockpiling has been at mill level and has yet to show up in consumer storage bins.

But with manufacturers now operating at about 83% of capacity, the rate soon will be at 85% and headed for 90%. This is calling for across-the-board reappraisals of order lead and delivery times.

(*Turn to page* 32, *column* 4)

Purchasing Week Industrial Materials Price Barometer

This index, based on 17 basic materials, was especially designed by the McGraw-Hill Department of Economics.



This Week's Commodity Prices

	Dec. 20	Dec. 13	Year Ago	% Yrly Change
METALS				
Pig iron, Bessemer Pitts., gross ton	67.00	67.00	67.00	0
Pig iron, basic, valley, gross ton	66.00	66.00	66.00	0
Steel, billets, Pitts., net ton	80.00	80.00	80.00	0
Steel, structural shapes, Pitts., cwt	5.50	5.50	5.50	0
Steel, structural shapes, Los Angeles, cwt	6.20	6.20	6.20	0
Steel, bars, del., Phila., cwt	5.98	5.98	5.97	+ .2
Steel, bars, Pitts., cwt	5.675	5.675	5.675	0
Steel, plates, Chicago, cwt	5.30	5.30	5.30	0
Aluminum, pig, lb	.24	.24	.26	— 7.7
Secondary aluminum, #380 lb	.212	.212	.23	— 7.8
Copper, electrolytic, wire bars, refinery, lb	.306	.306	.296	+ 3.4
Brass, yellow, (sheet) lb	.493	.493	.493	0
Lead, common, N.Y., lb	.103	.103	.11	— 6.4
Nickel, electrolytic, producers, lb	.813	.813	.74	+ 9.9
Tin, Straits, N.Y., lb	1.205	1.219	1.006	+19.8
Zinc, Prime West, East St. Louis, lb	.12	.12	.12	0
FUELS				
Fuel oil #6 or Bunker C, Gulf, bbl	2.20	2.20	2.30	— 4.3
Fuel oil #6 or Bunker C, N.Y., barge, bbl	2.62	2.62	2.62	0
Heavy fuel, PS 400, Los Angeles, rack, bbl	2.10	2.10	2.05	+ 2.4
Lp-Gas, Propane, Okla., tank cars, gal. (incl. discount)	.03	.03	.045	—33.3
Gasoline, 92 oct. reg., Chicago, tank car, gal	.115	.11	.126	— 8.7
Gasoline, 84 oct. reg., Los Angeles, rack, gal	.108	.108	.105	+ 2.9
Kerosene, Gulf, Cargoes, gal	.10	.10	.093	+ 7.5
Heating oil #2, Chicago, bulk, gal	.098	.098	.098	0
CHEMICALS				
Ammonia, anhydros, refrigeration, tanks, ton	94.50	94.50	94.50	0
Benzene, petroleum, tanks, Houston, gal	.31	.31	.34	— 8.8
Caustic soda, 76% solid, drums, carlots, cwt	4.80	4.80	4.80	0
Coconut oil, inedible, crude, tanks, N.Y. lb	.12	.12	.134	—10.5
Glycerine, synthetic, tanks, lb	.248	.248	.293	—15.4
Linseed oil, raw, in drums, carlots, lb	.188	.188	.162	+16.0
Phthalic anhydride, tanks, lb	.15	.15	.185	—18.9
Polyethylene resin, high pressure molding, carlots, lb	.275	.275	.275	0
Polystyrene, crystal, carlots, lb	.18	.18	.18	0
Rosin, W.G. grade, carlots, fob N.Y. cwt	13.15	13.15	17.50	—24.9
Shellac, T.N., N.Y. lb	.31	.31	.31	0
Soda ash, 58%, light, carlots, cwt	1.55	1.55	1.55	0
Sulfur, crude, bulk, long ton	23.50	23.50	23.50	0
Sulfuric acid, 66° commercial, tanks, ton	22.35	22.35	22.35	0
Tallow, inedible, fancy, tank cars, N.Y. lb	.058	.058	.061	— 4.9
Titanium dioxide, anatase, reg. carlots, lb	.255	.255	.255	0
PAPER				
Book paper, A grade, Eng finish, Untrimmed, carlots, cwt	17.75	17.75	17.75	0
Bond paper, #1 sulfite, water marked, 20-lb, 16-carton lots, cwt	25.20	25.20	25.20	0
Chipboard, del. N.Y., carlots, ton	100.00	100.00	100.00	0
Wrapping paper, std. Kraft, basis wt. 50 lb rolls	9.50	9.50	9.50	0
Gummed sealing tape, #2, 60 lb basis, 600 ft. bundle	6.30	6.30	6.60	— 4.5
BUILDING MATERIALS				
Cement, Portland, bulk carlots, fob New Orleans, bbl	3.65	3.65	3.65	0
Cement, Portland, bulk carlots, fob N.Y., bbl	4.20	4.20	4.20	0
Southern pine, 2x4, s4s, trucklots, fob N.Y., mftbm	107.00	107.00	116.00	— 7.8
Douglas fir, 2x4, s4s, carlots, fob Chicago, mftbm	123.00	123.00	129.00	— 4.7
Spruce, 2x4, s4s, carlots, fob Toronto, mftbm	83.00	83.00	82.00	+ 1.2
Fir plywood, ¼" AD, 4x8, dealer, crld, fob mill, msf	60.00	60.00	68.00	—11.8
TEXTILES				
Burlap, 10 oz. 40", N.Y., yd	.142	.14	.140	+ 1.4
Cotton middling, 1", N.Y., lb	.355	.356	.323	+ 9.9
Printcloth, 39", 80x80, N.Y., spot, yd	.178	.178	.175	+ 1.7
Rayon twill, 40½", 92x62, N.Y., yd	.215	.215	.215	0
Cotton drill, 1.85, 59", 68x40, N.Y., yd	.375	.375	.355	+ 5.6
Wool tops, N.Y., lb	1.610	1.630	1.455	+10.7
HIDES AND RUBBER				
Hides, cow, light native, packers, Chicago, lb	.215	.215	.170	+26.5
Rubber, #1 std ribbed smoked sheets, N.Y., lb	.281	.278	.289	— 2.8

(Price sources include: Coal Age, E&MJ Metal and Mineral Markets, Engineering News-Record, Platts Oilgram Price Service.)

Purchasing Week's

Price Perspective

ORDERS AND PRICES—With new steel billings at a two-year high and copper orders rising at a time they normally fall, it's easy to see why suppliers are firming up their entire price structure.

The change in the economic climate has already eliminated much of the price shading that was so prevalent in 1960 and 1961—and is already making for significant boosts in a lot of materials and finished goods. In the last four weeks, for example, PURCHASING WEEK's "Price Changes for P.A.'s" column reported close to 40 individual price increases. That's something that hasn't happened since early 1959.

Experts look for the order wave to accelerate in early 1962. They see a combination of hedging and better consumer goods demand pushing the hard goods monthly order pace to $17-billion. That would be a record high—and 30% above early 1961 levels.

The consumer demand factor is especially significant. If a 6.4-million to 6.8-million car year materializes, in 1962, as the Commerce Dept. forecasts, it means a 17%-24% increase in auto consumption of metals, plastics, glass, textiles, and a host of other key materials.

• • •

PRODUCTIVITY AND PRICES—Soaring productivity continues as one of the most effective anti-inflationary factors in the current price picture.

A glance at latest production and manhour figures point up how substantial recent gains have been.

Over the past year, for example, industrial output has gone up by some 8.5%. Factory manhours, on the other hand, have been just about stable—rising less than 1% over the same period. Putting all this another way, it means there has been more than a 7% rise in output per man hour over the past 12 months.

Economists are a little wary about projecting gains of this magnitude into 1962, pointing out that in the early stages of recovery manufacturing productivity always tends to rise faster than normal—as men and machines are more effectively utilized.

But generally speaking, most remain optimistic about avoiding any substantial wage-cost pressure. They note that even if productivity gains slow down to 5%, they should be more than enough to offset increases in wages and fringes, estimated to range between 3½%-5% (P/W, Dec. 11, '61, p.1).

• • •

THE EASING SQUEEZE—The corporate profit picture is brightening—despite release by the Securities & Exchange and Federal Trade Commission last week of disappointing figures covering the third quarter.

Experts point out that the third quarter was distorted by several factors: (1) the usual summer slowdown, (2) model changeover in auto field, and (3) spotty work stoppages.

According to leading economists, there's every reason to expect a new high record for corporate profits in the first half of 1962. They cite these reasons:

• **Diminishing cost-price squeeze.** Price increases coupled with hefty boosts in productivity (see above) should push profit margins up.

• **Higher economic activity.** Other things being equal, sales increases always result in higher profits.

• **Tax reform.** If the Administration can push through tax cuts on equipment write-offs, it will make for a hefty increase in after-tax profits.

Consensus is that first-half after-tax profits will approach $25-billion. That would be 17% over first half 1961 figure of $21.4-billion.

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Latest Price News in Brief

Azelaic acid—Emery Industries dropped azelaic acid quotes by 1¢, to 36¢/lb. in carload quantities. The firm had cut prices 3¢/lb. when it expanded its production facilities for this important chemical in mid-June.

Construction equipment—Chain Belt Co. raised prices 3%-5% on its Rex lines of construction machinery because of rising costs. Similar hikes were posted for construction equipment by Koehring Co.

Midwest heating oils and fuels—Continental Oil kicked off a ½¢/gal. increase in No. 1 and No. 2 fuel oils in the Midwest area, bringing refinery quotes to 10½¢/gal. and 9¾¢/gal. respectively. Two refiners also are raising kerosene and high grade diesel oil by the same amount to 11¢/gal.

Farm tractors and implements—International Harvester raised farm equipment prices by an average 2.4% because of increased costs. Deere & Co. also hiked tags about 3% on selected items.

Aluminum alloy ingot—Apex Smelting of Chicago and George Sall Metals Co. of Philadelphia announced price reductions of ½¢/lb. for their aluminum alloy products following the alloy ingot price cuts made by primary aluminum producers.

Tellerium slab—U. S. Smelting, Refining and Mining Co. is adding a 50¢/lb. charge for conversion of tellerium powder into slab. Better demand is behind the change which boosts the slab price to $5.75/lb. f.o.b. refinery.

Sugar—Industrial sugar prices are up 1/5¢ a pound. The increase covers both bulk dry and liquid industrial sugars and refined in 100-lb. paper bags.

Polyester film—DuPont lowered prices for 14 types of its Mylar polyester film by 15¢/lb. to 25¢/lb. The move brings the range for these films to $1.40-$3.50/lb. Production economies were given as the reason.

Dye intermediates—Prices for three textile dye intermediates are slated to go up on Jan. 1. The new tank car quotes will be 90¢/lb. for meta-toluidine, up 6¢; 96¢/lb. for N-ethyl-m-toluidine, up 9¢; and 95¢/lb. for N-N-diethyl-m-toluidine, also up 9¢.

Epoxy resins—Reductions of 3¢/lb. were made by Shell and Ciba in their epoxy resin lines. New truckload prices are 62¢/lb. for Shell's Epon 815 and Epon 820, and 65¢/lb. for Ciba's Araldite 506.

This Week's Scrap Prices

	Dec. 20	Dec. 13	Year Ago	% Yrly Change
Steel, #1 hv, dlvd Pitt, ton	36.00	36.00	27.00	+33.3
Steel, #1 hv, dlvd Clev, ton	33.50	33.50	25.00	+34.0
Steel, #1 hv, dlvd Chic, ton	33.00	32.00	26.00	+26.9
Copper, #1 wire, dlr buy, fob NY, lb	.235	.23	.225	+ 4.4
Copper (hv) & wire mix, dlr buy, fob NY, lb.	.215	.21	.205	+ 4.9
Brass, light, dlr buy, fob NY, lb	.12	.12	.105	+14.3
Brass, hv yellow mix, dlr buy, fob NY, lb	.14	.14	.120	+16.7
Alum (cast), mixed, dlr buy, fob NY, lb	.09	.09	.09	0
Alum (sheet), old clean, dlr buy, fob NY, lb.	.09	.09	.085	+ 5.9
Zinc, old, dlr buy, fob NY, lb	.03	.03	.03	0
Lead, soft or hard, dlr buy, fob NY, lb	.06	.06	.078	−24.1
Rubber, mix auto tires, dlvd Akron, ton	11.00	11.00	11.00	0
Rubber, synth butyl tubes, East, dlvd, lb	.073	.073	.063	+15.9
Paper, old corrug box, dlr, Chic, ton	18.00	18.00	13.00	+38.5
Paper, #1 mixed, dlr, NY, ton	3.00	3.00	1.00	+200.0
Polyethylene, clear, dlr, NY, lb	.03	.03	.08	−62.5

New Goodyear Low-Cost Nylon Cord Truck Tires

Akron, Ohio—Goodyear Tire & Rubber Co. has introduced a new low-cost nylon cord truck tire, the "Hi-Miler R C." The tire is designed especially for farm and intra-city commercial trucks.

Goodyear officials said the new tire would provide the safety and strength of a nylon tire at minimum price. Tire cost was not disclosed, but Goodyear said it would be priced competitively.

The tire is manufactured in three sizes — 6.00-16, 6.70-15 and 8.25-20.

Temco Sets Up Program To Train Subcontractors In Component Reliability

Dallas — Suppliers will be brought into a new type of reliability program being undertaken here to assure dependability of actuators in Minuteman missiles.

Temco Electronics, subsidiary of Ling-Temco-Vought, Inc., is conducting the program under a $600,000 contract awarded by North American Aviation's Autonetics Div. Temco will be responsible for assuring that the actuators will work, even after long periods of underground storage.

The program embraces some 20 categories, from design review through handling and packaging. Temco already has set up reliability training programs for its own personnel and subcontractors. It now is setting up the programs among suppliers, using funds supplied under the contract.

Copper Alloy Bulletin

BRIDGEPORT BRASS COMPANY

Bridgeport

Are you overlooking the 4TH dimension in design?

We're referring to "grain size". Our experience in supplying copper and brass alloys for a wide variety of applications tells us that all too often metals are specified with little regard to grain size.

This can be a serious oversight in engineering design.

Grain size affects the strength, hardness and elongation of copper-base alloys. Formability and surface finish, too. Ever wonder why, after a severe forming operation, a metal part exhibited an "orange peel" surface? Grain size was too large. A finer grain size would have saved many hours of polishing time.

Selecting the best grain size for a metal part involves consideration of production techniques, surface finish requirements and strength requirements. No one grain size can successfully satisfy all the various combinations of these three factors.

To help you determine the correct grain size for your product, Bridgeport maintains a Technical Service Department staffed with skilled specialists in metallurgy and production processes.

For detailed information on how grain size affects product design, send for a copy of our booklet, "The Fourth Dimension of Brass." Write to Bridgeport Brass Company, Bridgeport 2, Connecticut.

Supreme Court Refuses to Consider Rail, Barge Long-Haul Rate Dispute

Washington — The Supreme Court has refused to pass judgment on whether the Interstate Commerce Commission sanctions an illegal competitive weapon against barge lines in permitting railroads to cut long-haul rates on a temporary basis.

The court, in a 6-3 ruling, based its refusal in part on a statement by government attorneys that the commission is changing its practice.

The case reached the court on an appeal stemming from a 1958 application by 17 major railroads for permission to charge lower rates for long hauls of grain from the Midwest to the East than they charged for short hauls.

Federal law generally forbids this, although the ICC is authorized to allow the lower rate in special circumstances.

On Jan. 9, 1959, the commission granted temporary authority for the rates to become effective. It did so without a prior investigation of their lawfulness or holding a hearing, although it ordered an inquiry started.

Months later the barge lines, concerned over defection of grain traffic to the railroads, petitioned a U. S. district court to have the temporary ICC order set aside. They contended that the commission violated the law by permitting the rate reduction to go into effect without a prior hearing.

But before the court could consider the case, the railroads withdrew their rate application and reverted to their old level of charges. The district court then threw the case out on grounds that there no longer was a controversy.

In their appeal to the Supreme Court, the barge lines insisted there still should be a judicial review of their complaint. They said the temporary ICC order should be declared illegal and that ICC should be forbidden to engage further in grants of rate cuts without prior hearing.

They alleged that the railroads had made a recurring practice of getting such temporary reductions and then withdrawing them whenever judicial action was threatened by protesting carriers.

'Hot Cargo' Ban Applied To Subcontracting Pacts

Washington — The National Labor Relations Board has ruled that unions and employers cannot agree to restrict farmed out work to contractors who bargain with the same union. A five-man unanimous board said such an agreement was an illegal "hot cargo" contract.

The board applied its "hot cargo" ban—which in general prohibits union-employer restrictions against the products of a neutral employer—for the first time to subcontracting. In two key cases, the labor agency threw out contract agreements between unions and employer associations that would require, where "feasible," that work subcontracted out by the employer go to shops organized by the same union.

The board said: "We see no meaningful distinction between a contract which prohibits an employer from handling products produced by a nonunion firm and a contract which causes an employer to cease subcontracting work to a nonunion firm."

The two cases involved "hot cargo" agreements between the Greater St. Louis Automotive Trimmers and Upholsterers Assn., Inc., and two unions, Teamster Local 618 and Machinist Dist. No. 9. In both cases, the unions sought to enforce the ban against subcontracting to several members of the Auto Dealers' Assn. with whom the unions were having a dispute.

Commerce Dept. Survey Discloses Manufacturers' Inventories Rising Slowly

(*Continued from page* 1)

points to continued upward trends in both sales and inventories. Manufacturers' inventories hit recession lows at midyear; since then they've been rising roughly $1-billion each quarter.

Thus, if businessmen are providing accurate anticipations, manufacturers' inventories at the end of March will be about $3-million higher than as of last June 30 (of the total, about two-thirds will be stocked by durable goods manufacturers, one-third by nondurables). The March figure is tabbed at $56.3-billion.

The way it looks in Washington, businessmen are reporting an inventory buildup that's about normal for the sales increases they projected when the survey was taken some weeks ago. But at this stage of the business cycle, say some experts, manufacturers tend to understate the amount by which their inventory situation will change.

The guessing by government economists is that the ratio of inventories to sales should be rising between now and next midyear, but the survey just published doesn't reflect any such change for the first quarter.

One straw in the wind is the figure showing how many manufacturers classify their inventories as "high." Analysis of past surveys shows that when manufacturers think their inventories are "high," they aren't in a mood to buy.

In the new survey, producers who own 12% of the total stocks covered termed their inventories "high," as against 18% three months earlier.

Bulk Mail Postal Fees To Be Boosted Jan. 10

Washington—The Post Office will cut back services to senders of second, third and fourth class mail and hike its fees effective Jan. 10. Senders will no longer be notified of address changes and won't be allowed to guarantee to pay forwarding charges.

Third class mail (advertising matter) without obvious value that can't be delivered will be destroyed unless senders mark it "return requested." A minimum charge of 8¢ will be made for each returned item.

The charge for informing senders of publications (second class mail) when they aren't deliverable will be raised from 5¢ to 10¢. The fee for returns of second class mail will be 10¢.

Prices Firming as Business Activity Speeds Up

(*Continued from page* 1)

dichloride, ethyl benzene, and other chemicals and plastics appear to be sticking.

● Higher textile and petroleum prices were largely responsible for scoring the first seasonal gain in the PURCHASING WEEK Industrial Wholesale Price Index since the previous recovery period in late 1958 (see page 4).

Chemical suppliers have made several attempts to boost prices to higher levels. But until recently, demand wasn't there to support bigger tags. Union Carbide, Dow Chemical, Firestone Plastics, Pantasote Co. have all been prominent in attempts to shore up organic chemical and plastics prices which had been sliding down steadily since last April.

Last week, Dow followed Union Carbide in raising Jan. 1 quotes by ½¢/lb. on ethylene and propylene dichloride and ethyl benzene, 2¢/lb. on its Alkanolamine SB (paralleling Union Carbide's hike on Polyamine T), and 3¢/lb. for butylene oxide. These were five of the nine tag boosts Union Carbide had announced just previously (P/W, Dec. 18, '61, p. 4).

E. E. Fogle, president of Union Carbide Chemicals, pointed up the significance of the firm's price moves as "part of the continuous examination of our product lines to insure reasonably profitable operations."

"We prefer to discontinue production of an item that we have to sell at a loss," Fogle told PURCHASING WEEK. "There is a growing realization among the people in our company that prices can't come down and costs go up indefinitely."

There has been price weakness, Fogle pointed out, in some product lines like acetone and phenol because of excess planned and actual capacity. But too often price cuts, made with the vague and seldom realized hope of opening up new markets, simply result in the same volume of business at lower profit levels.

In plastics, the most recent move to put starch in product prices was Pantasote's 4% hike in its polyvinyl chloride film quotes, also scheduled for Jan. 1. Dow and others previously had failed in a drawn-out effort to raise polystyrene tags.

The chairman of the NAPA Chemical Buyers' Group, Quentin F. Ebert, P.A. at Pittsburgh Plate Glass Co.'s Chemicals Div., told PURCHASING WEEK that the selective price increases were "likely to stick." Ebert indicated that although there was still a buyers' market in basic chemicals, he felt the specialties would lead prices upward.

"There hasn't been too much feedback from buyers on these increases," he said. Since buyers for chemical firms can see "both sides of the business, they note that the profit squeeze has eased a bit."

All this indicates that individual firms will be sifting their product mix for opportunities to post hikes wherever possible to counteract the continuing tag cuts engendered by competitive conditions in the industry. Price increases on fertilizer chemicals, lead-free zinc salts, dye-intermediates, silver salts tend to offset lower levels for various resins, azelaic acid, polyester film, and leaded zinc oxide.

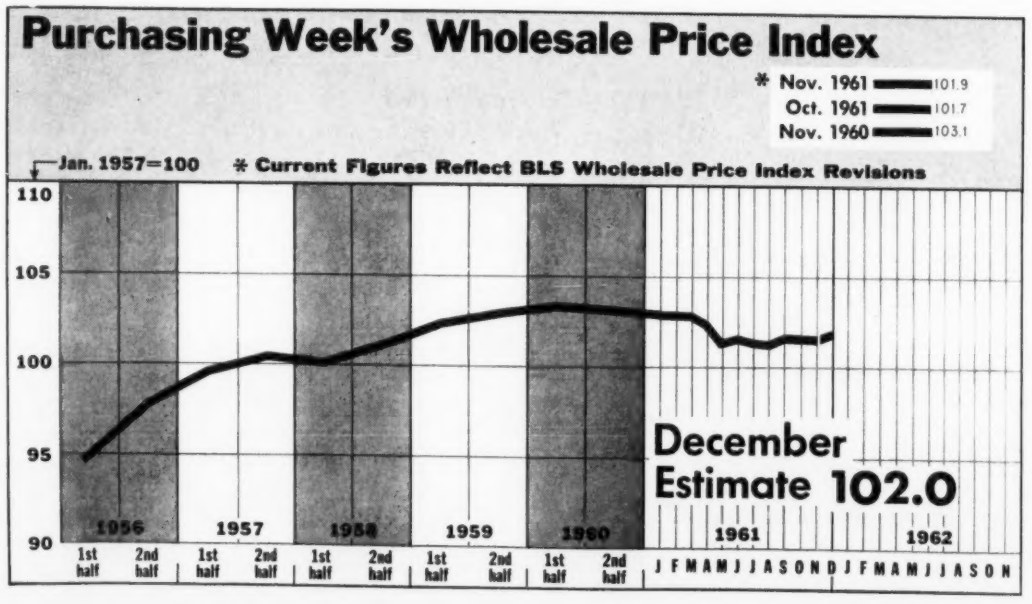
Industry analysts feel that starting in January, when many of the boosts take effect, these divergent movements should keep over-all chemical prices fairly stable until growing demand strengthens currently weak areas.

For December, however, chemical cuts, along with tag paring among aluminum alloys, should modify the firming prices in other industrial products and hold down the rise in over-all industrial prices for the current month.

This Month's Industrial Wholesale Price Changes

Item	Latest Month	Month Ago	Year Ago	% Yrly Change
Cotton Broadwoven Goods	98.7	98.4	99.0	— .3
Manmade Fiber Textiles	92.0	91.5	95.2	— 3.4
Leather	123.2	123.9	110.1	+11.9
Gasoline	93.1	91.6	99.4	— 6.3
Residual Fuel Oils	80.7	80.1	82.6	— 2.3
Raw Stock Lubricating Oils	112.6	112.6	111.0	+ 1.4
Inorganic Chemicals	103.8	103.8	103.5	+ .3
Organic Chemicals	93.8	93.8	98.0	— 4.3
Prepared Paint	106.5	106.5	103.5	+ 2.9
Tires & Tubes	92.1	92.9	95.0	— 3.1
Rubber Belts & Belting	108.1	108.1	108.7	— .6
Lumber Millwork	102.7	102.9	105.5	— 2.7
Paperboard	89.9	89.9	97.2	— 7.5
Paper Boxes & Shipping Containers	101.4	101.4	105.2	— 3.6
Paper Office Supplies	103.5	103.5	103.2	+ .3
Finished Steel Products	108.4	108.4	108.8	— .4
Foundry & Forge Shop Products	108.3	108.4	108.3	0
Nonferrous Mill Shapes	95.2	95.7	98.3	— 3.2
Wire & Cable	88.1	88.1	87.1	+ 1.1
Metal Containers	106.2	106.2	104.1	+ 2.0
Hand Tools	114.3	114.2	112.7	+ 1.4
Boilers, Tanks & Sheet Metal Products	101.9	101.5	101.4	+ .5
Bolts, Nuts, etc.	118.5	118.4	106.3	+11.5
Power Driven Hand Tools	113.3	113.3	108.4	+ 4.5
Small Cutting Tools	116.2	116.0	118.5	— 1.9
Precision Measuring Tools	115.1	115.1	109.5	+ 5.1
Pumps & Compressors	112.1	112.1	112.4	— .3
Industrial Furnaces & Ovens	121.1	121.1	122.5	— 1.1
Industrial Material Handling Equipment	109.1	109.0	107.6	+ 1.4
Industrial Scales	117.1	117.1	115.7	+ 1.2
Fans & Blowers	104.7	104.7	105.1	— .4
Office & Store Machines & Equipment	106.4	105.9	105.5	+ .9
Internal Combustion Engines	105.2	105.1	104.4	+ .8
Integrating & Measuring Instruments	122.5	122.5	121.3	+ 1.0
Motors & Generators	93.4	93.4	100.5	— 7.1
Transformers & Power Regulators	89.6	89.4	96.6	— 7.2
Switch Gear & Switchboard Equipment	107.2	107.2	104.6	+ 2.5
Arc Welding Equipment	104.4	104.4	109.1	— 4.3
Incandescent Lamps	129.2	129.3	130.9	— 1.3
Motor Trucks	105.4	105.4	104.4	+ 1.0
Commercial Furniture	106.7	106.7	106.9	— .2
Glass Containers	102.8	102.8	101.3	+ 1.5
Flat Glass	96.0	96.0	97.6	— 1.6
Concrete Products	104.5	104.7	104.3	+ .2
Structural Clay Products	107.6	107.6	107.8	— .2
Gypsum Products	108.0	108.0	104.7	+ 3.2
Abrasive Grinding Wheels	94.4	94.4	94.8	— .4
Industrial Valves	113.1	112.0	114.1	— .9
Industrial Fittings	88.7	88.7	89.9	— 1.3
Antifriction Bearings & Components	89.3	89.2	90.8	— 1.7

Purchasing Week's Wholesale Price Index



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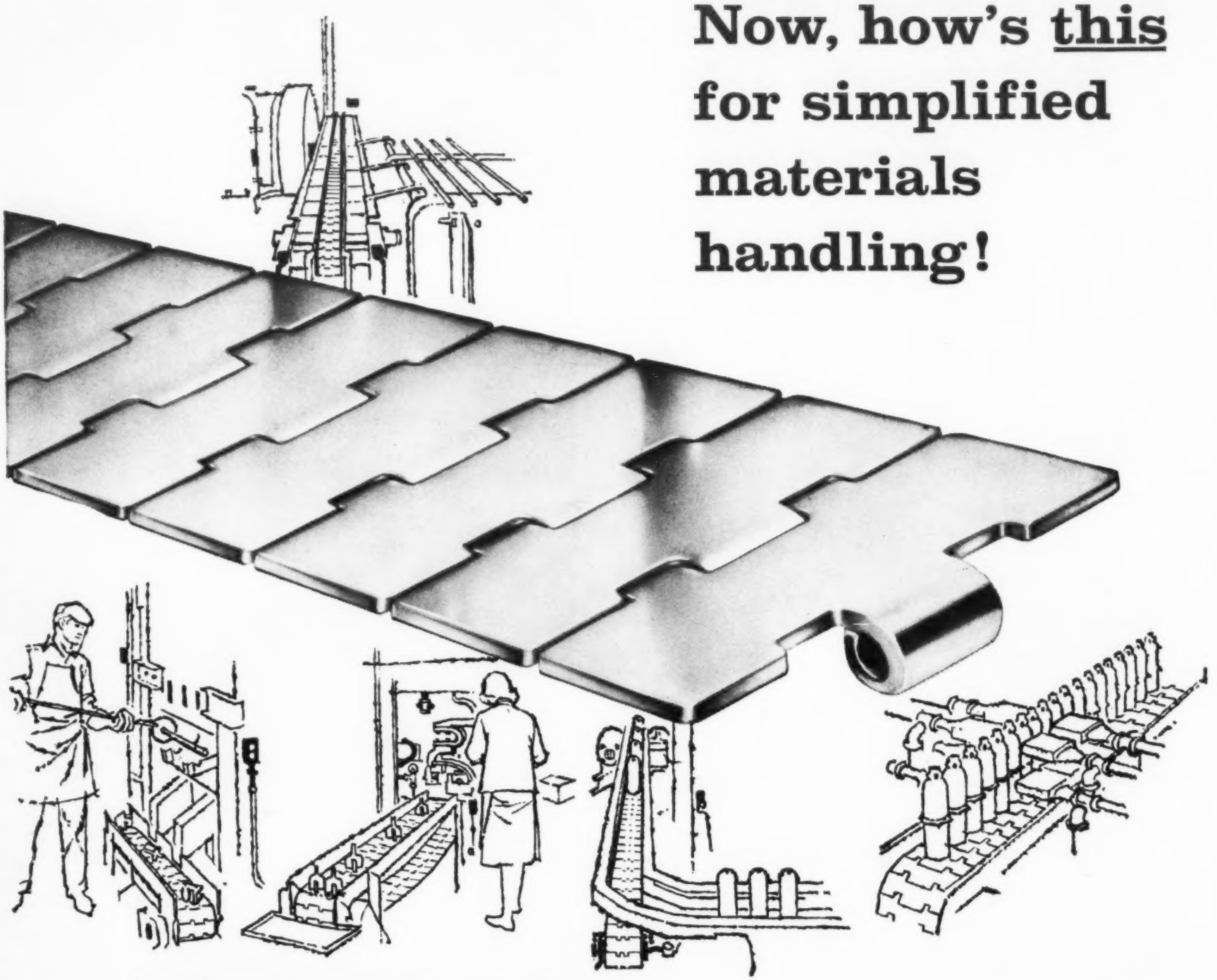

REX TableTop® Chain

If you are handling anything from small, fragile parts to hot abrasive forgings, Rex TableTop may very well be just the thing for you, too. It's simple; it's versatile; it's economical!

It quickly became the leading "tops" chain in the food, bottling and canning industries. Now Rex TableTop is bringing new, cost-cutting service to a wide variety of industrial applications.

If you want long, trouble-free service life without lubrication or if conditions are abrasive, hot, cold, wet or corrosive, Rex TableTop is ideal—for Rex TableTop is available in a variety of materials: carbon steel, stainless steel, or new Delrin (a new acetal resin by DuPont), and in five widths from 3¼" to 7½".

REX TABLETOP:—provides a flat, continuous plane carrying surface. Rex close-hinge design practically eliminates the gap between plates—smallest, tallest parts ride tip-free, snag-free—provides top economy! Simple, 2-piece construction—platform link and pin—means low initial cost, easy installation and lowest possible maintenance expense.

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REX TABLETOP OF CARBON STEEL—heat-treated for maximum strength and longest wear life—handles hot, abrasive forgings and heavy parts or boxes easily.

REX TABLETOP OF STAINLESS STEEL—provides strength and wear life of steel, yet resists corrosion.

REX TABLETOP OF DELRIN—stays strong, wet or dry; requires no lubrication; resists corrosion from most acids, alkalies or brine solutions; resists abrasion, will not scratch or mar the most delicate items.

For complete information on all Rex TableTop Chains, write CHAIN Belt Company, 4702 W. Greenfield Ave., Milwaukee 1, Wis. In Canada: Rex Chainbelt (Canada) Ltd., Toronto and Montreal.

Decision on Resid Import Controls Seen Possible Early in New Year

Washington—A decision on the future of import controls on residual fuel oil may be coming up early next year, a top Kennedy Administration aid indicated last week.

Frank B. Ellis, director of the Office of Emergency Planning, deflated coal industry hopes that the decision would be put off until mid-1962, and thus brightened prospects that import restrictions on the heavy industrial fuel will quickly be scrapped, or considerably eased to let in more oil.

President Kennedy put off making any changes in crude oil import restrictions, and ordered Ellis's agency to complete a study of crude oil restrictions by mid-1962. Coal industry supporters of resid controls were heartened, interpreting the move to mean that controls on residual fuel oil would also be maintained in their present form at least through cold weather.

Controls on residual fuel oil are under heavy attack from East Coast consumers, who charge the restrictions have hiked fuel prices generally.

Ellis explained that his agency's verdict on residual fuel oil controls will be made independently of the study on crude oil, and said the residual oil decision "shouldn't necessarily be delayed" until mid-1962. Ellis' agency has been studying the residual oil situation for several months.

Hawaii Asks Okay To Buy Foreign Fuel Oil

Honolulu — The state of Hawaii has asked for federal authorization for purchase of its entire 15,000 bbl./day fuel oil demand from foreign sources.

Since all oil is delivered to Hawaii by tanker, authorization would allow the state to take advantage of market fluctuations to get the best buy. Savings could amount to $1.5-million/year, a state official said.

The Hawaiian Electric Co. uses half the state's fuel oil supply and its rate structure is pegged to oil prices.

P.A.'s Across Nation Queried In Study of Corporate Gift-Giving

Carbondale, Ill. — Southern Illinois University is making a study of corporate gift-giving and is sending out queries to purchasing agents across the nation, asking about their firms' policies and their own feelings about the practice.

Some of the questions:

- "Has this policy been formalized in writing?"
- "How is this policy enforced?"
- "Has there been a revision in your organization's 'gift' policy within the last three (3) years?"
- "Do you feel that by accepting a gift the buyer-supplier relationship is . . . A. Improved? B. Improved slightly? C. No effect? D. Slightly impaired? E. Impaired?"

The study is being conducted by Dr. James D. Benson, associate professor of marketing, with the cooperation of the St. Louis, Mo., chapter of National Association of Purchasing Agents.

AMA Official Stresses Management Character Of Purchasing Function

New York — Purchasing performance is getting a critical review by top management in terms of dollar contribution to net profit.

"Management now expects cost savings from purchasing," Samuel C. Farmer, American Management Assn.'s Purchasing Div. manager told Metropolitan Purchaser Club members recently.

Starting at the buyer level, he said, purchasing departments are initiating regular reports showing individual contributions to the profit picture by savings achieved through vendor change, negotiations, value analysis, etc.

Farmer stressed that purchasing people today are tremendously anxious to prove in dollars exactly what they can do. And, he added, purchasing's performance can be measured better than any other department within a company.

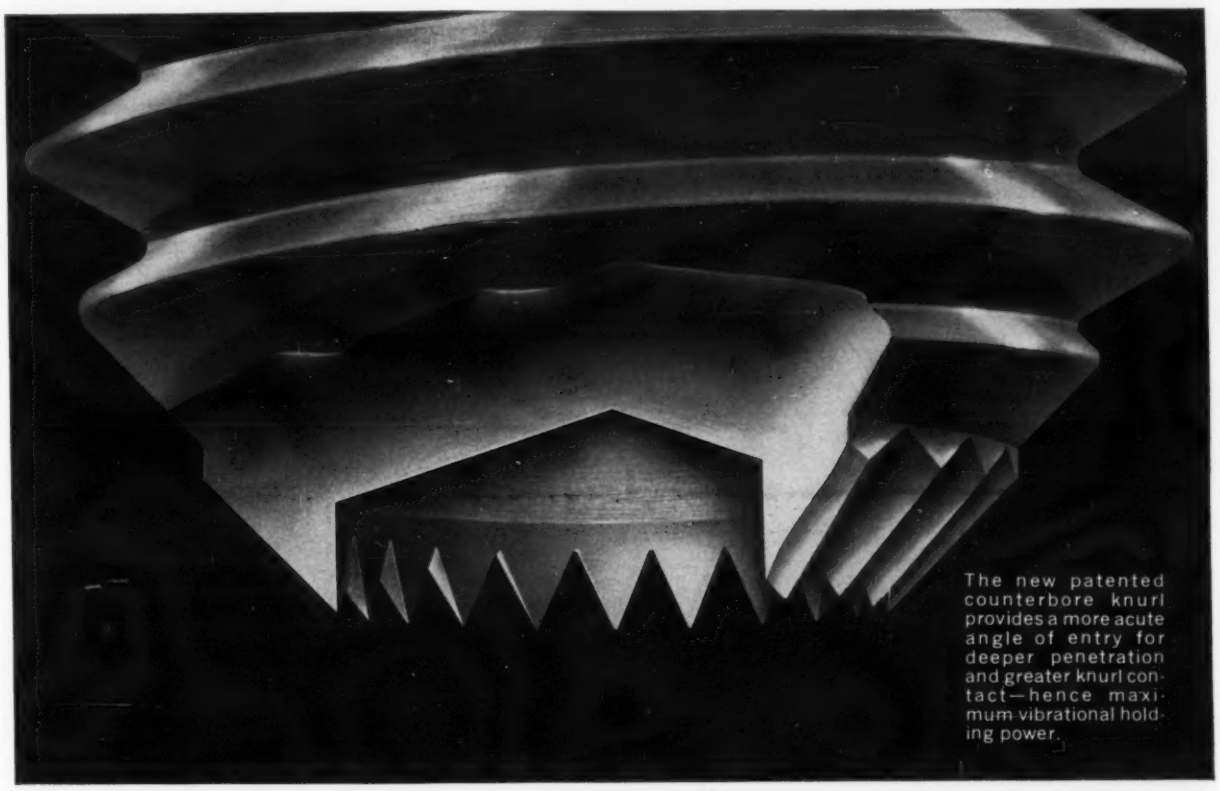
Where companies have continued to show a net profit this often can be traced to purchasing, said Farmer. "It is a management function and a very dynamic one."

Tenneco Oil Introduces Middle-Grade Gasoline

Houston—The so-called "octane battle" has been intensified in the Southwest by the introduction of a new "middle grade" product by Tenneco Oil Co., putting the firm in the ranks of marketing companies now selling three grades of gasoline.

Gulf and Humble Oil recently abandoned their "super premium" gasolines to start distributing two grades of regular gasoline, designed to meet the requirements of compact cars (see P/W, Dec. 4, '61, p. 13).

Tenneco introduced the new grade in approximately 50 stations in the Texas-Louisiana area and said it intends to go to three grades in some 200 stations throughout the South.



The new patented counterbore knurl provides a more acute angle of entry for deeper penetration and greater knurl contact—hence maximum vibrational holding power.

NEW . . . AND TO THE POINT!

"The one that won't work loose" *cuts the cost of holding power.* That, very simply, is the story of the new UNBRAKO High Torque with the patented counterbore* knurl point—*available right now and at no increase in price.*

Vibrational holding power can be mighty expensive . . . if the set screw cracks in tightening, has to be frequently replaced or retightened, or comes loose and causes costly downtime and machinery repairs. That's why the new UNBRAKO with counterbore knurl—a direct evolution of the already proven UNBRAKO knurled cup point set screw—is clearly your best value.

As you see from the illustration, with the counterbore knurled cup point, the angle at the point of entry is extremely acute. This permits easier and deeper penetration, greater knurl contact. The result is a positive locking action *before* . . . and unparalleled vibrational holding power *at* the recommended seating torque.

In addition to the counterbore knurl, the new UNBRAKO High Torque offers another advance unique among set screws—the Hi-Life Thread. A smoothly radiused thread root not only distributes stresses to permit significantly higher tightening torques, but also adds metal to this critical area between the root of the thread and the extra-deep UNBRAKO socket.

Get true production economy. Insist on UNBRAKO—"the one that won't work loose."

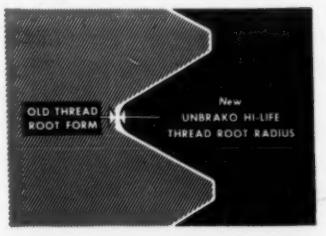
The new UNBRAKO High Torque Set Screw—with counterbore knurl and Hi-Life threads—comes in sizes #4 through 1 in. Your authorized UNBRAKO distributor has a complete supply on hand *now.* For a copy of the new booklet on UNBRAKO High Torque Set Screws, write to Standard Pressed Steel Co., INDUSTRIAL FASTENER DIVISION, SPS, JENKINTOWN 48, PENNSYLVANIA.

**No. 2,992,669—patented July 18, 1961*

SPS

where reliability replaces probability

Smoothly radiused root of Hi-Life thread distributes stress concentration at critical point, thus making possible UNBRAKO's higher tightening torques.



Purchasing Week's
Washington Perspective

Industry is being assured of some unexpected tax benefits out of the Administration's revision of Bulletin F. This is the guide used by Internal Revenue Service agents in assessing the useful life of equipment in calculating depreciation deductions on business tax returns.

In a memo issued last week spelling out the application of the revision for textile manufacturers announced a few weeks ago, Internal Revenue shows how textile companies can take larger deductions on equipment already in use which hasn't yet been depreciated fully.

Something similar is being dangled before other industries—particularly machine tools, electrical equipment, autos, steel, aircraft and rails—in the spring.

IRS previously had given textiles permission to write off for tax purposes productive equipment in 15 years (12 years in some unusual cases) instead of the normal 20-25 years. In effect, this allows companies to take larger annual tax deductions on their productive machinery.

The hoped-for result, of course, is the purchase of new equipment to modernize the industry, output of new products (or at least new models), and the placing of U.S. industry in a more favorable competitive position with foreign firms.

The shorter useful life was anticipated. The rather unexpected windfall comes on two points announced last week:

- Textile companies can take the larger annual deductions permitted on equipment already in use.
- The new allowances are permitted to companies on all tax returns due on or after Oct. 11, 1961. Since companies are allowed 2½ months to file a return after the close of their tax year, this means that textile firms can take the benefit of the new depreciation rulings for their tax year if it ended last July 31 or thereafter.

Similar rulings have been promised for the six industries now under study, and perhaps even others.

• • •

Some cut in drug prices may result from price lists unveiled by the Senate Antitrust and Monopoly Subcommittee. Herman C. Nolen, president of McKesson & Robbins, appeared before Sen. Estes Kefauver's (D-Tenn.) subcommittee last week armed with his price lists, which indicate that McKesson wholesales some ethical drugs for as much as 90% under competitors' prices.

This points up one of Kefauver's pet theories—that manufacturers maintain high drug prices by continuing to market products on which patents have expired under their own trade names.

One example of the results: McKesson, a major distributor which began marketing such drugs earlier this year under generic names, lists prednisolone at $2.50 for 100 tablets. Other companies, says Kefauver, list the same drug under their own trade names for as much as $17.90.

Nolen said McKesson as of now plans to make drugs only on which patents have expired and which are established on the market. Later, he added, the company may think about licensing patented drugs and even doing some research.

• • •

A 5% to 8% rise in U.S. consumption of aluminum foil used in packaging is expected next year. The estimate comes from the Commerce Dept.'s Business and Defense Services Administration. This year's consumption is estimated at 240-million pounds, compared to 227-million lb. in 1960.

• • •

Consumption of natural rubber continues to outstrip production. The Natural Rubber Bureau reports that 1961 consumption will total about 2.05-million tons, some 32,000 tons more than was produced. The difference was supplied by U.S. and British stockpile disposals. This is the fifth of the last six years in which sales exceeded output.

When Texaco cut needed lubes from 36 to 15—the P. A.'s paper work went down accordingly

When each department in a plant specifies the lubricants it wants, without reference to purchases of other departments, there's bound to be duplication and waste—and an unnecessary flood of P.O.'s. A Texaco "Stop Loss" Program can help eliminate this duplication and waste—cut purchase order paperwork by up to 80%. It will be worth your while to find out specifically how Texaco "Stop Loss" can help ease this problem in your plant.

Find out, too, how Texaco "Stop Loss" can help your firm cut maintenance costs by as much as 15%, boost net profit by as much as 4%.

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Newspaper P.A.'s to Hold Fifth Annual Conference In St. Pete Jan. 25-27

St. Petersburg Beach, Fla.—The fifth Annual Conference of Newspaper Purchasing Executives will be held at the Colonial Inn here Jan. 25-27.

Speakers at the meeting include Nelson Poynter, publisher of the St. Petersburg Times, who will discuss his paper's expansion plans, and Larry Martin, a building maintenance expert from Atlanta. A representative of the General Telephone Co. of Miami will discuss the application of new phone equipment to newspaper operations.

Lou Davis, of the Los Angeles Times-Mirror, will moderate a "Good Buys" session in which 15 newspaper buyers will describe unusual purchases that have resulted in substantial savings to their firms.

The meeting is open to any newspaper purchasing executive. Reservations may be made with E. P. Parrish of the St. Petersburg Times or the group's president, Daniel J. Lewis of the Christian Science Monitor.

White Collar Wage Spiral Boosts Overhead Costs

New York—An increase in the number of white collar employees rather than direct production labor is responsible for a big part of the labor cost squeeze faced by the nation's manufacturers today. That's the implication behind a new Chase Manhattan Bank study which reveals a tremendous increase in indirect labor costs over the past decade.

The bank documents with facts and figures how "overhead" labor has changed the whole cost structure of industry. Some of its specific findings:

- **Unit salary costs**—A huge jump in clerical and professional workers has pushed salary cost per unit of output up by some 60% in the past decade—or close to 5% a year (see chart alongside).

- **Unit wage costs**—Here the situation is a bit different. Thanks to a 3% annual rise in productivity, production worker labor cost per unit of output has remained relatively unchanged over the past decade.

- **Total unit labor costs**—Combine stable production wages and soaring salary costs per unit of output, and the figures show that the total unit labor cost has gone up about 20% in the past ten years—about 2% a year.

The Bank's economists—while raising the question "Is overhead too big?"—are quick to point out that a good deal of the rise in this labor category was inevitable. Total non-production worker employment rose from 16% of the manufacturing labor force to over 25%. But under today's business conditions, heavy increases in white collar workers have been a must because of:

- **Research and Development**—There has been a sharp rise in the number of research workers needed. Today's $11-billion worth of research requires a lot more workers than the only $3.6-billion spent in 1953 for research.

- **Automated equipment**—Automated facilities require more non-production workers for design, installation, planning, and control. At the same time they reduce the need for production workers.

- **Record-keeping**—Paper work has been on the increase—what with today's pension funds, grievance machinery, personnel testing, tax reporting, etc. All these require more non-production workers.

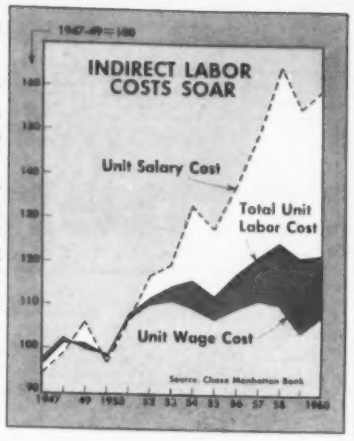
The Chase notes that this 25% boost is an average. In some industries it is much larger. Thus in ordnance there is one white collar worker for every production worker. In the chemicals industry there are two white collar workers for every three production workers—and the ratio isn't much different for the instrument, petroleum, and machinery industries.

The effect of all this, of course, has been to boost over-all salary payrolls. Last year, for example, the Chase estimates that 34% of manufacturing payrolls went to salaries. In 1947, only about 25% went to this source.

This larger percentage tends to make factory payrolls much less flexible, for white collar workers are much more likely to be kept on payrolls during a period of falling production than production workers.

This makes for a growing problem for manufacturers. As the bank notes the failure of employment to respond to changes in output "means that unit costs can rise sharply in recession."

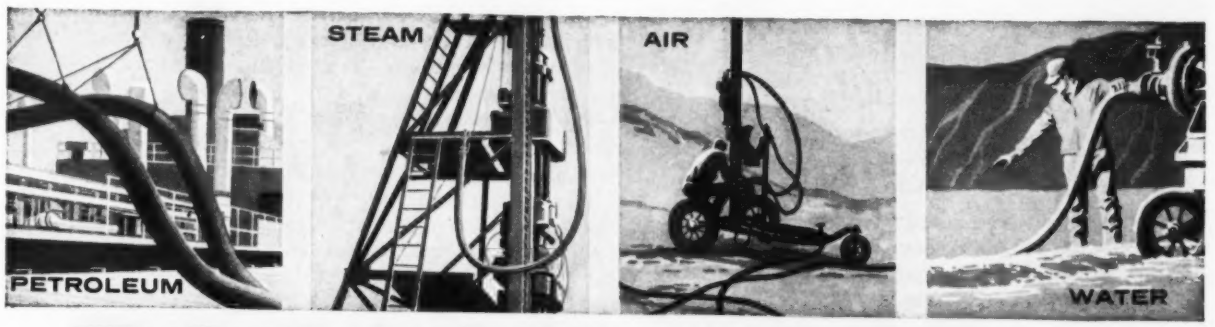
Another question arises about whether or not the increase in overhead costs is justified. Chase Manhattan business economist V. Stevens Hastings replies: "If it is case of companies wisely investing in white collar people and professionals whose efforts will pay off in 5 years or so, then they shouldn't be too concerned over any current profit pinch due to high unit labor costs."



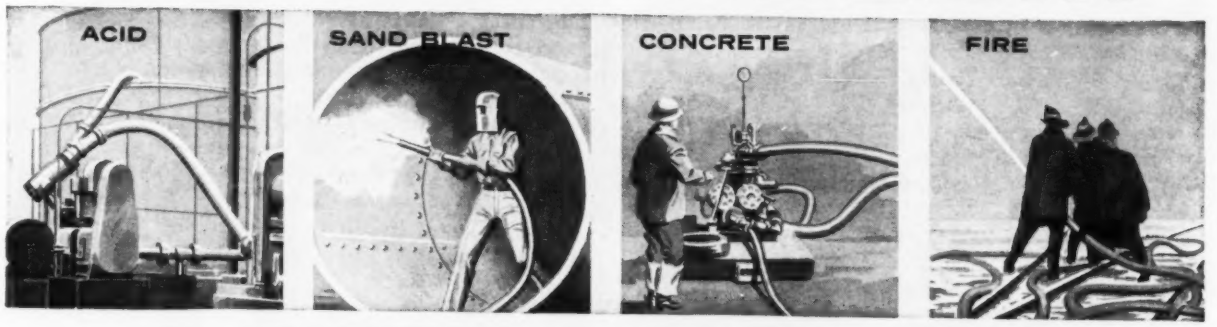
New Petrochemical Plant Opened Up by Witfield

Long Beach, Calif.—Witfield Chemical Corp.'s $1.75-million petrochemical plant in nearby Watson has gone on stream. Capacity of the facility is 30-million lb. of detergent alkylate per year.

Witfield is jointly owned by Richfield Oil Corp., Los Angeles, and Witco Chemical Co., Inc., New York. The new plant is adjacent to Richfield's refinery, which supplies the petroleum raw materials for the Witfield facility. Marketing of the plant's output is handled by Witco.



BOSTON HOSE...



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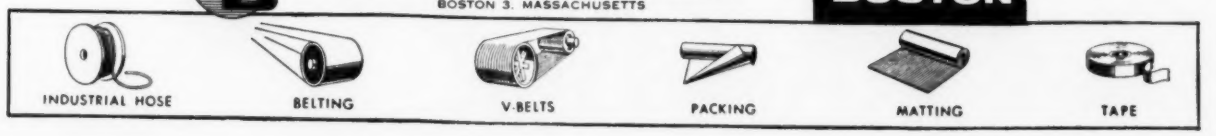

R. F. Hennig Named V.P.

Cleveland—Robert F. Hennig, Sherwin-Williams Co. director of purchases since 1944, has been named a vice president and director of the paint and chemical firm. Hennig joined the company in 1927 as a cost clerk.

Audit Bureau of Circulations

Purchasing Week

Associated Business Publications

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Management Memos

Importance of Listening

Since listening is an activity that takes up more of your time than any other in a typical working day, it's only natural to get the most from what you hear.

But efficient listening is difficult, says Professor H. W. Hildebrandt of the University of Michigan in AMA's *Supervisory Management* magazine, because of five factors which jam receptivity.

According to Hildebrandt, our attention span is extremely brief—sometimes no more than two or three seconds. Even in face-to-face contact, listening is easily derailed. No matter how closely you listen, a person is only able to understand clearly the precise meaning of 600-900 words in a 10-minute conversation. In addition to these two pitfalls—attention and understanding—our thinking speed far exceeds our listening rate. Since we're way ahead of the speaker, and our thoughts wander while we wait for him to catch up.

Another obstacle we encounter is that of bias. Objective listening is complicated by the fact that we interpret what we hear in terms of our prejudices, moods, and attitudes to the person speaking.

Here is how Prof. Hildebrandt, a speech specialist, suggests we get around these listening roadblocks.

1. Be receptive—Listen to new ideas even though they clash with your present way of thinking.

2. Concentrate—Follow the thread of ideas from the initial sentence to the conclusion.

3. Become involved—As the speaker goes on, maintain a running mental summary of his points.

4. Ask questions—Make sure that you clarify all the speaker's points.

5. Prepare—Try to get background information in advance of detailed technical speeches.

6. Know the general purpose—Ask yourself: Is the speaker's purpose to give me information? Is he trying to stimulate me to greater effort? Or is he simply trying to entertain me?

7. Know the central idea—If you are aware of the general theme, it's easier to see how other items in a speech relate to the main topic. The sentence which states the central idea, usually comes in the first few sentences of the discussion.

Know as You Grow

Perhaps you can't teach an old dog new tricks, but "an executive who stops learning, stops earning his way," according to Robert Froman in *Nation's Business*.

Froman says that the key to your capacity to absorb new facts and ideas lies in mastering three concrete suggestions: Realize your ignorance, keep your expectations limber, and concentrate on processes.

● **Recognize your ignorance.** The man who claims he knows everything, renounces all hope of learning anything about it. New circumstances make it sometimes vital to seek information that never before seemed worth the trouble. That search is impossible if we imagine we already have all that counts.

● **Keep your expectations limber.** The strong tendency to find what we are looking for, to see what we expect to see, can rigidly limit our power to take in new information and ideas. Trouble begins when the expectations become so rigid that they reshape incoming material to fit themselves instead of altering to accommodate it.

● **Concentrate on patterns.** There are two ways to learn something new—one way is to memorize separate items separately; the other way, and the more preferred says Froman, is to concentrate not on separate and static items of information but on patterns of information.

Concentrating on patterns of information rather than on isolated facts not only prevents you from getting caught short when facts prove changeable. It also keeps you constantly aware that there is more to learn, since the processes link in endless chains with others going on around them.

Purchasing Parade

Personal glimpses of P.A.'s as they march by in the news

Meteorites and other identified flying objects that pepper the Earth from outer space hold special fascination for **Frank B. Shafer** (above), new **P.A.** at **Stanley Aviation Corp.,** Denver, Colo.

His varied collection of meteorites includes several he found in what is known as the Stone City Fall, about 12 miles northwest of Pueblo. They are made up mostly of nickel iron; some contain copper, gold, and silicon; others have traces of cobalt.

Shafer has even cut, polished and etched some of the pieces for ornaments on key chains, etc., as gifts.

"The most interesting thing about these meteorites," Shafer says, "is that till now we've been relying on theories and scientific deductions about where they come from and how they get to Earth. In our lifetime we are going to have an absolute explanation of them; trips into space will determine that."

Shafer pursues his meteorite hobby along with being an expert skier (he's a certified instructor) and tuning up expensive foreign cars for friends.

■ ■ ■ ■

Another P.A. with some rare collections is **Howard Smith** of **Carborundum Co.,** Niagara Falls, N. Y.

He has an extensive stamp collection, consisting exclusively of commemorative issues and also engages in mint proof coin collecting.

For more active pursuits, Smith favors bowling, golf, and boating. He is a director of the Niagara Falls Bowling Assn. and a member of the Carborundum Co. 25-Year Club.

■ ■ ■ ■

Director of Purchases John Kiefer of the **Ohio Ferro-Alloys Corp.** has been closely related to United Fund work for the past seven years—as solicitor, team captain, group leader, industrial division chairman, and general chairman. This year, he was general chairman of his county for the job of raising funds as a means of support to 34 human service organizations. The goal was over $1-million—and it was met.

■ ■ ■ ■

Don Brichta, recently appointed **Manager of Purchasing** for the **Power Train Group** of **Chrysler Corp.,** Detroit, returned to league bowling this season after a six-year absence and already is sporting a 198 average.

Fellow keglers in the Chrysler Purchasing League were surprised at his sharp tenpin eye until they discovered he is a 12-year vet of the motor city's All-Star League, and at the age of 17 was carrying a 200-plus average.

Brichta is still shooting for every bowler's dream—the perfect game. He once scored 300 in a practice session, but had to settle for a 298 as his record for an ABC sanctioned game.

For summertime fun, Brichta becomes a week-end golfer, shooting a highly respectable round of 85.

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Purchasing Week Asks

Is there any value in price buying?

Question asked by: J. A. Callahan, Purchasing Agent
Pittsburgh Steel Co., Pittsburgh

W. L. Howlett, purchasing agent, Firestone Tire & Rubber Co., Des Moines:

"Considering the term price buying to mean basing your purchase on lowest price excluding the other factors commensurate to making a good buy, there is little value in price buying. Excessively low quotations should alert the buyer to possible errors or other factors worth investigating. Every effort should be exerted toward buying at the lowest attainable fair price as long as the product and vendor meet standards of integrity, quality, quantity, service, and know how."

W. M. Jones, office manager, American Moistening Co. (humidifying equipment), Cleveland, N. C.:

"With today's keener competition in our field, price buying is not only valuable but necessary. We find our suppliers often are more interested and serve us better when they know we are price minded. Occasionally, we are surprised to find that a new source, prompted by price, offers value in design or technique which we had not anticipated. Our search, however, must never renounce the quality required in our product line to guarantee maximum customer service."

Mrs. Mary Larson, purchasing agent, Micro-Semiconductor Corp., Culver City, Calif.:

"Our business is such that we cannot afford to price buy. When manufacturing a micro-miniature device that must pass many demanding tests, all constituent parts must be absolutely free of any risks such as are often involved in price buying. We have found that prices for a given quality of chemicals, precious metals, etc., are usually rather similar (when not exact) and that any significant price difference means some sacrifice of quality. Our exception to this is in buying such items as office supplies, etc."

C. C. Fryk, manager of purchasing, Combustion Engineering Inc., Chattanooga, Tenn.:

"This is too general a question to answer with a simple yes or no, since there could be many varying factors involved. Each transaction should be analyzed based on its over-all return in value to the company. If we classify ourselves as 'value' buyers, then price should be considered along with quality, service, delivery, etc. In those rare occasions where quality, service, or performance are not present, then the award can only be based on price."

N. B. Lovell, assistant purchasing agent, Omark Industries, Inc., Portland, Ore.:

"Buying on price alone for the industrial purchasing agent can have only one result—sudden death. Price is, of course, one of the basic considerations but cannot be divorced from the other fundamentals which are axioms of sound purchasing. These include the proper level of quality for the applications, reliability of the vendor, and delivery. When these essentials have been met, price buying can be of value if conducted morally, ethically and consistent with good business practice."

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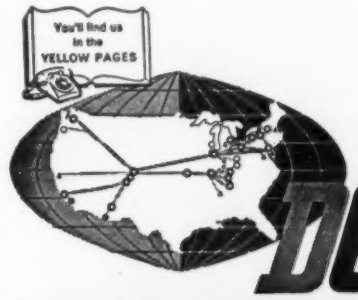

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U.S. Science Files Damage Suit Against FAA

Inglewood, Calif.—U. S. Science Corp. a subsidiary of United Industrial Corp., said it has terminated all existing contracts with the Federal Aviation Agency and filed a damage suit against the agency and Najeeb E. Halaby, its administrator.

D. J. Harnett, vice president and counsel of United Industrial, said the precedent-breaking action marked the first time a contractor has filed suit prior to the government's termination of a contract.

U. S. Science charged the federal agency violated the terms of its agreement with confusing and contradictory actions which made it impossible for the company to meet its contractural commitments. The company asked the court to grant a judgment on the basis that FAA's actions constituted a breach of contract and that the company was entitled to damages.

Company officials said deliveries totaling approximately $5.7-million had been made, including $500,000 in 1961, for which no payment has been received.

According to Harnett, the contracts involved manufacture of equipment for air navigation. Sideband generators and other equipment for very-high-frequency omnidirectional range-finding (VOR) and instrument landing systems (ILS) comprised the bulk of the orders from Federal Aviation Agency.

The action was filed against Halaby individually as well as in his capacity as the administrator of the Federal Aviation Agency. No date has been set for the hearing as yet.

ICC Backtracks on Scheme to Give More Routing Leeway to Truckers

Washington—The Interstate Commerce Commission has decided to retain the restrictions which limit common carrier trucking operations to specific and sometimes circuitous routes.

In doing so, the commission rejected an idea first advanced by itself three years ago. The ICC originally had suggested that truckers be given virtually complete routing freedom by allowing them to choose the shortest practical routes between any two service points. It was felt this would reduce operating costs and provide shippers with faster service.

Large segments of the trucking industry, however, opposed the plan. The National Industrial Traffic League, representing shippers, also had serious doubts about the ICC's proposals, although it lauded their intent.

The protesting truckers took the position that the ICC proposals would:

- In effect authorize new motor carrier services without proof that they are required by public convenience and necessity.
- Disrupt the competitive situation in the industry and lead to a chaotic disorganization of present operating patterns.
- Deprive established motor carriers of property rights in their operating certificates without due process of law.

The commission wound up by deciding that its proposals are not justified at this time and that existing procedures are adequate to permit truckers under certain circumstances to operate over alternate routes.

Transport Study Begun In Upstate New York

Albany, N. Y.—New York State and the federal government have launched a joint study of transportation problems in the Buffalo-Niagara Falls area in an effort to reduce travel time, costs, and accidents.

The $1,250,000 project, known as the Niagara Frontier Transportation Study, will serve as a pilot program for similar studies planned for other upstate metropolitan areas, according to J. Burch McMorran, superintendent of the State Dept. of Public Works.

In addition to rail and truck movements, the study will cover bus, private automobile, taxi, and pedestrian traffic.

4 Carbon Dioxide Firms Fined in Price-Fix Case

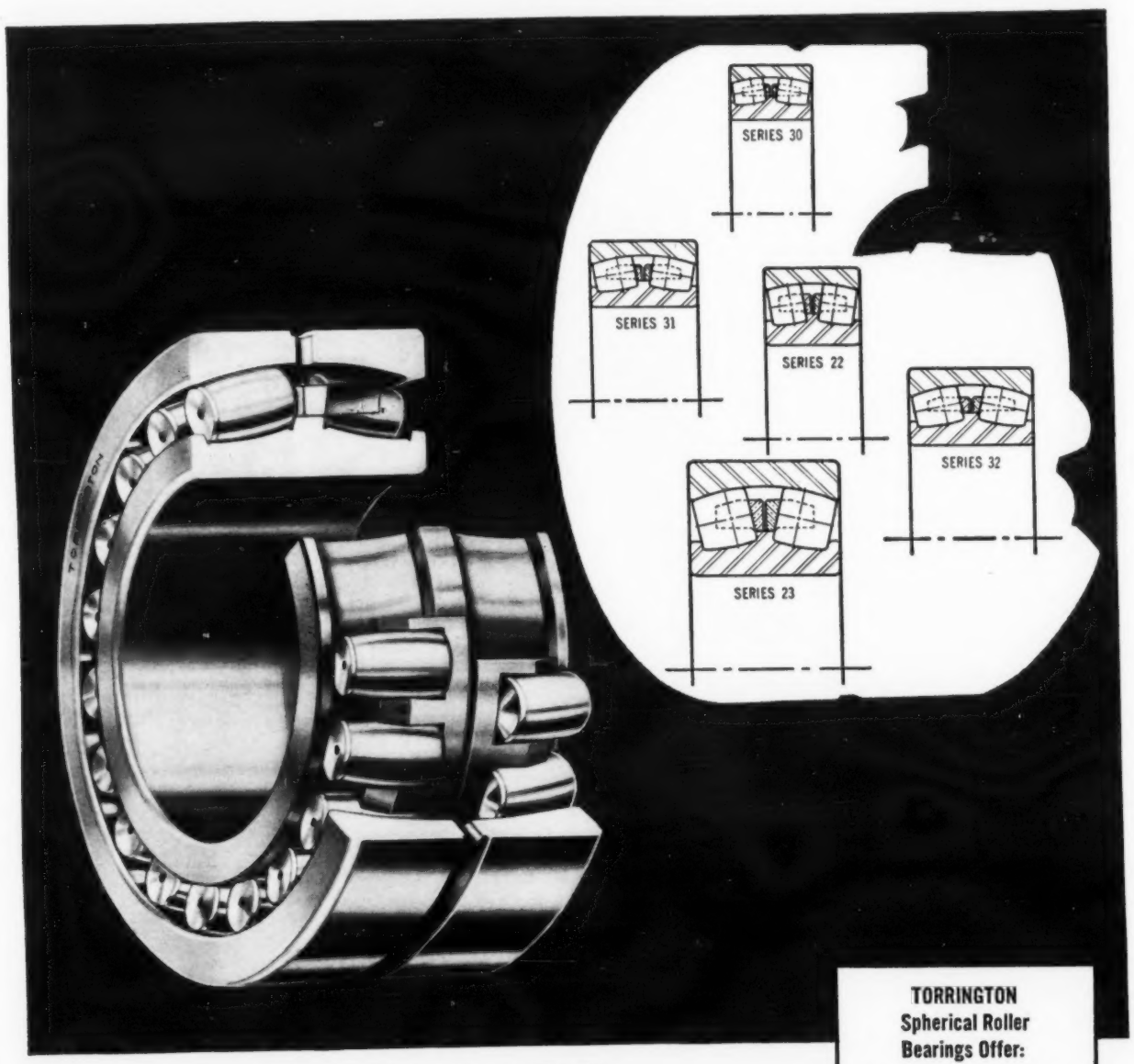
New York—Four carbon dioxide firms and officials of two of the companies were fined last week for violating a federal consent decree on price fixing.

The Liquid Carbonic Div. of General Dynamics Corp. and Air Reduction Co. pleaded guilty to the contempt of court charge. Chemetron Corp. and Olin Mathieson Chemical Co., though not a party to the 1952 decree, pleaded no contest. The government charged that the four firms conspired to violate the agreement not to fix carbon dioxide prices.

Saturn Contract to Boeing

Washington—Boeing Co. has been awarded a $300-million contract to develop the first stage of the Saturn rocket to carry three men on an orbit around the moon.

The first stage of the rocket, the S-IB, will be built at Boeing's plant in Michoud, La., new New Orleans. The second stage of the rocket, the S-II, will be built by North American Aviation, Inc.



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CALL TO ORDER: Hall B. Whitworth, president of Carolinas-Virginia Assn., gets winter meeting under way. Seated are H. V. Jungbluth and Paisley Boney.

ATTENTIVE DELEGATES: In addition to professional topics, P.A.'s also heard talk by Rep. Charles Raper Jonas (R-N.C.) on effect of the soaring national debt.

Pro-D, Purchasing 'Image' Stressed At Carolinas Virginia P.A. Meeting

Pinehurst, N. C. — The top echelon of the National Assn. of Purchasing Agents mustered at the annual winter meeting of the Carolinas-Virginia P.A. Assn. to boost professional development and outline what NAPA is offering to further it.

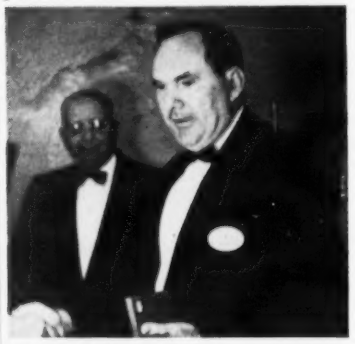
The "image" of the P.A. and that of the purchasing profession as a whole also received top billing at the session.

Speakers included NAPA Pres. Russell T. Stark, Sr.; Harold A. Berry, chairman of the NAPA Professional Development Committee; Paisley Boney, past president of the national association and now chairman of its Public Relations Committee; H. J. Jungbluth, vice chairman of the Public Relations Committee, and D. A. Cook, Dist. 5 vice president.

Stark stressed the responsibility of the individual in shaping the image of purchasing.

"Some of the distorted views that others have of us as P.A.'s can't be walked away from," he said. "What we say about ourselves can't change this image. What we do is more important.

"Probably no other professional is stereotyped so much by the actions of one of its members," he said. "Let one P.A. perform an unethical act, and



AWARD WINNER: G. C. Meetze accepts group's 1961 Thomas Award as W. G. Thomas looks on.

the whole profession becomes downgraded. We are judged by deeds, not only of ourselves but of others in the profession."

Stark said that building the proper image of the P.A. "will be a long process and will take special effort on the part of every member of NAPA."

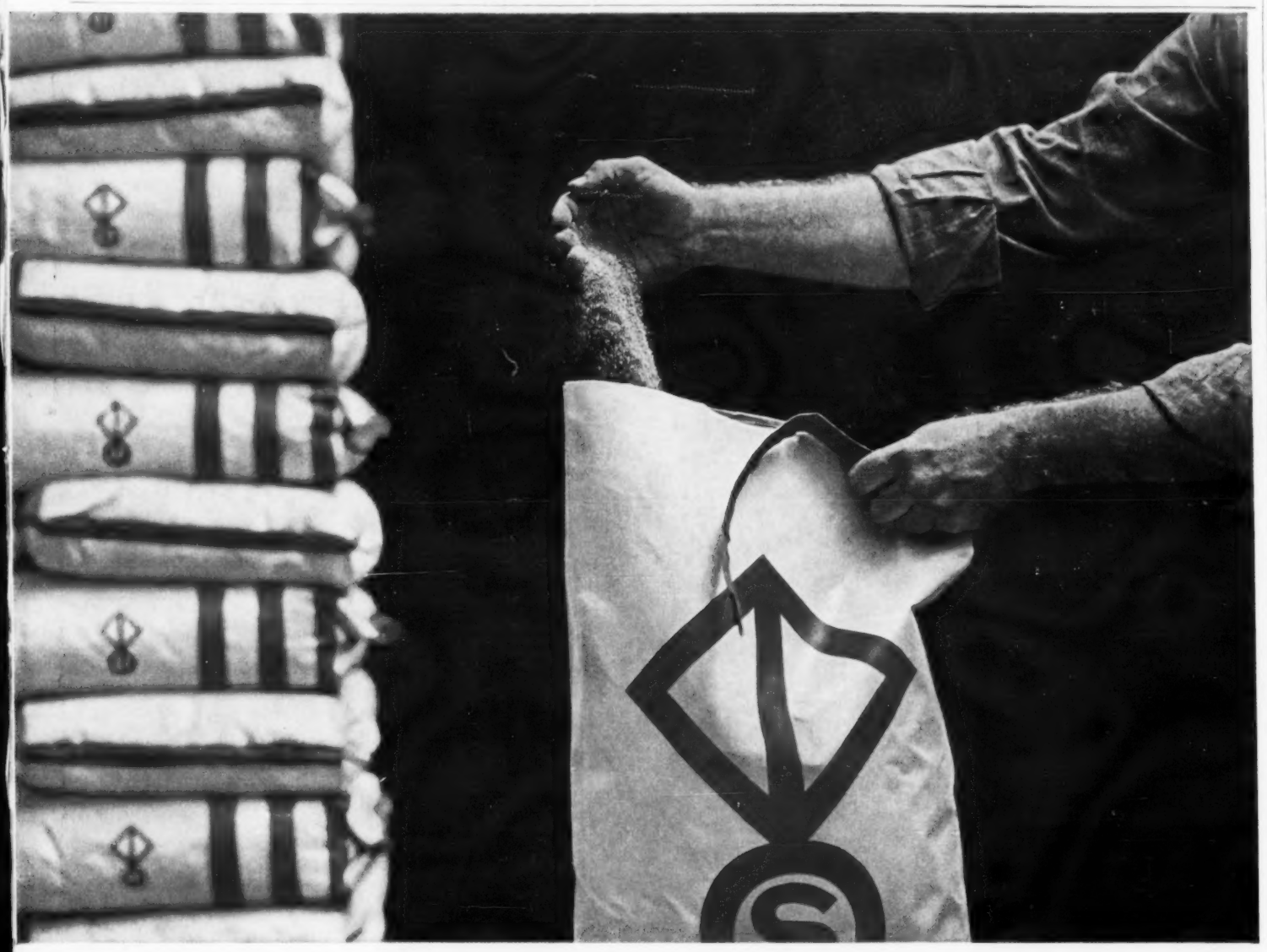
Jungbluth said purchasing men "have more going for us (in NAPA) toward building an image than any other group."

Berry and Cook both stressed the need of individual P.A.'s, from neophytes to top departmental executives, for keeping abreast of the latest purchasing techniques and other developments through professional development. Berry detailed the work of NAPA in this field.

Boney also touched on the subject. "A man can get a full education in purchasing—free—through NAPA publications," he said.

B. B. Parker, vice chairman of the Carolinas-Virginia group, conducted an open forum during which P.A.'s in the audience contributed their ideas on a wide variety of topics ranging from socializing with salesmen to training of new buyers.

At a banquet attended by an estimated 400 members and guests, the association's Thomas Award was presented to Grayson C. Meetze, manager of purchasing and automotive equipment for South Carolina Electric & Gas Co. Meetze was cited as the member who had contributed most during the past year to the Carolinas-Virginia group and his company. The presentation was made by C. C. Johnson, Jr., R. J. Reynolds Tobacco Co., a past recipient, and W. G. Thomas, founder and first president of the Carolinas-Virginia association, in whose honor the award was established.



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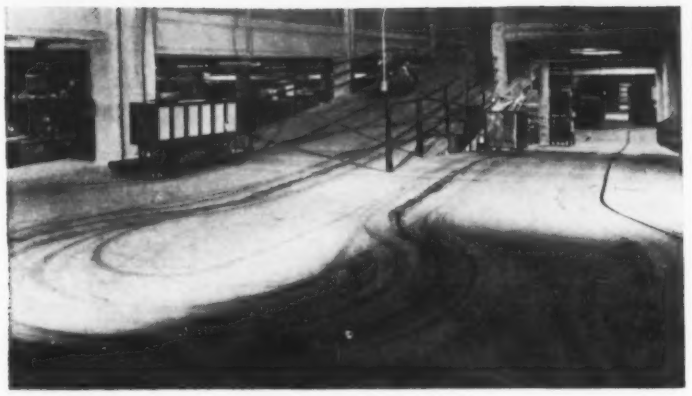


WAREHOUSE AUTOMATION: Link-Belt Trukveyor carries hi-fi set from warehouse into Polsky's department store, Akron, Ohio. Half-mile conveyor winds through 3 floors, can move 110 trucks at once.

Frank W. Egan

Somerville, N.J.—Frank W. Egan & Co., has completed a $350,000 expansion program, doubling its plant facilities. The firm manufactures machinery and equipment for the paper converting, plastics processing, rotogravure printing, textile finishing, and metal forming industries.

Eriez

Erie, Pa.—Eriez Mfg. is expanding into a third plant to house its newly established Coil Winding Div. Eriez, a producer of permanent magnetic equipment, said the new division will perform work formerly subcontracted to other companies.

Uddeholm

Chicago—Uddeholm Co. of America has opened its Specialty Steel Service Center in suburban Elk Grove Village, Ill. The $250,000 installation, part of the Centex Industrial Park, will provide the warehousing facilities and will stock a complete line of specialty spring and strip steels, tools and die steels, and seamless steel boiler tubes.

Pittsburgh Plate Glass

Pittsburgh — Pittsburgh Plate Glass Co.'s Chemical Div. has started construction of a methyl chloroform plant at Lake Charles, La. Methyl chloroform, an industrial solvent, in pilot plant-operation since 1960, will be marketed under the trade name Tri-ethane. Production is scheduled to start by the fall of 1962.

Scoville

Waterbury, Conn. — Scovill Mfg. Co. is planning to expand its aluminum operations by building a 62,000 sq. ft. plant next to the company's strip mill here. The plant will be supplied with aluminum reroll stock supplied from a new hot mill in Oswego, N.Y., which Scovill is building with three other companies.

Warner & Swasey

Cleveland—Warner & Swasey Co., machine tool manufacturer, has purchased the assets of the Lahr Machine & Tool Corp., Toledo, Ohio. The acquisition will be known as the Lahr Machine Div. of Warner & Swasey Co. and will continue to operate in Toledo under existing management.

High Temp Materials

Boston — High Temperature Materials Inc., a producer of pyrolytic materials, has established a permanent office in Sunnyvale, Calif., to provide engineering services for customers west of the Mississippi.

Brush Beryllium

Cleveland—Brush Beryllium Co. has named Specialized Electronic Corp. as a sales agent for its beryllium oxide and other ceramic products throughout the South.

Hewlett-Packard

Palo Alto, Calif.—Hewlett-Packard Co. has leased a 20,000 sq. ft. building in Colorado Springs, Colo., which will be used for the manufacture of oscilloscopes. Operation of the plant is expected to start in the spring of 1962.

Chicago Molded Products

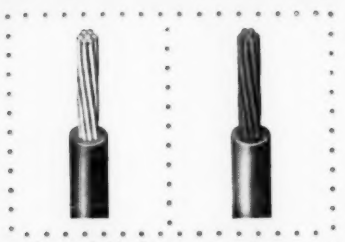
Chicago — Chicago Molded Products Corp. has acquired 40 acres of land with a 150,000 sq. ft. industrial building and an adjoining 20,000 sq. ft. office building in Michigan City, Ind. The new property will be used as headquarters for the company's Campco Plastics Co. division.

Long-Lok Midwestern

Los Angeles—Long-Lok Midwestern Corp., a division of Long-Lok Corp., has opened general offices and plant in Cincinnati, Ohio. Long-Lok Midwestern manufactures self-locking bolts and screws.

S. D. Warren

Boston—S. D. Warren Co., a manufacturer of specialty papers, will build a new paper mill at its Muskegon, Mich. plant next year.



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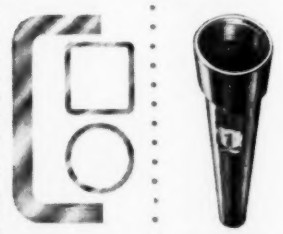

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P/W Guide to Distributors Of Stainless Steel, Aluminum, Copper & Brass

To round out your file of metal distributors PURCHASING WEEK herewith gives you the most complete list of stainless steel, copper, and brass service centers available anywhere. (A basic-steel list appeared last week.)

This roster is a merger of data compiled by *American Machinist/Metalworking Manufacturing* (McGraw-Hill) and membership lists of the Natl. Assn. of Aluminum Distributors and the Copper & Brass Warehouse Assn. Every name that turned up in any of these records is included below.

An asterisk (*) indicates that the data was taken from *American Machinist/Metalworking Manufacturing*'s 1961 file, and that the distributor has not seen fit to change it. A double asterisk (**) indicates a potential supplier from whom no further information was received.

Stainless Steel Distributors

	Bar & rod, cold rolled	Bar & rod, hot rolled	Sheet, cold rolled	Sheet, hot rolled	Coil & strip, cold rolled	Coil & strip, hot rolled	Plate	Pipe & tube, welded	Pipe & tube, seamless	Wire	Structural	Shapes, semifinished	Shapes, extruded	Shapes, roll formed	Clad	Fittings, Fasteners
ALABAMA																
BIRMINGHAM																
Atlantic Steel Co, Warehouse Div	X	X	X	X	X	X	X	X	X	X						
Hinkle Supply Co, Inc			X													X
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
O'Neal Steel Inc			X	X			X	X	X						X	
J M Tull Metal & Supply Co, Inc	X	X	X				X	X	X	X	X	X	X			X
U S Steel Supply Div	X	X	X				X	X	X							X
ARIZONA																
PHOENIX																
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X				X		
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
Pacific Metals Co, Ltd	X	X	X	X	X		X	X	X	X	X	X	X	X		X
ARKANSAS																
LITTLE ROCK																
Delta Metals, Inc			X		X											
CALIFORNIA																
BERKELEY																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Ducommun Metals & Suppl/ Co	X	X	X	X	X	X	X	X	X					X		
EMERYVILLE																
Caine Steel Co	X	X	X	X	X	X	X									
ESCO Corp	X	X	X	X	X		X	X	X	X	X	X	X	X		X
Joseph T Ryerson & Son Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LOS ANGELES																
Allen Fry Steel Co	X	X														
Baker Tube Co								X	X							
Caine Steel Co	X	X	X	X	X	X	X									
Carpenter Steel Co	X	X								X						
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X				X		X
ESCO Corp	X	X	X	X	X		X	X	X	X	X	X	X	X		X
Jessop Steel of Calif	X	X		X		X	X				X					
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
Kilsby-Tubesupply								X	X							
Maas-Hansen Steel Corp		X	X	X	X		X				X		X			
Pacific Metals Co, Ltd	X	X	X	X	X		X	X	X	X	X	X	X	X		X
Republic Supply Co	X	X	X		X		X			X						X
Rolled Alloys Inc		X	X	X			X	X	X	X			X			
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Service Steel Div, Van Pelt Corp								X	X							X
Universal-Cyclops Steel Corp	X	X								X						
U S Steel Supply Div	X	X	X				X	X	X							
NATIONAL CITY																
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X				X		
OAKLAND																
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
SAN LEANDRO																
Kilsby-Tubesupply								X	X							
Baker Tube Co								X	X							
Pacific Metals Co, Ltd	X	X	X	X	X		X	X	X	X	X	X	X	X		X
SAN FRANCISCO																
Baker Tube Co								X	X							
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X			X		
Gilmore Steel Corp	X	X	X	X	X	X	X					X	X			
Pacific Metals Co, Ltd	X	X	X	X	X		X	X	X	X	X	X	X	X		X
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X				X	
U S Steel Supply Div	X	X	X				X	X	X							
SANTA FE SPRINGS																
Jessop Steel of Calif	X	X	X	X	X	X	X				X				X	
SOUTH GATE																
*Shultz Steel Co		X					X									
SOUTH SAN FRANCISCO																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
COLORADO																
DENVER																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
ESCO Corp	X	X	X	X	X		X	X	X	X	X					X
M L Foss Inc	X	X	X	X					X							X
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
Marsh Steel & Aluminum Co			X	X			X									
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
CONNECTICUT																
HARTFORD																
American Steel & Aluminum Corp	X	X	X	X	X	X	X	X	X	X	X					
Peter A Frasse & Co, Inc	X	X	X		X		X	X	X	X						X
Universal Cyclops Steel Corp	X	X								X						
MILFORD																
Edgcomb Steel of New England Inc	X	X	X		X		X	X	X		X					X
NEW HAVEN																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
WALLINGFORD																
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WATERBURY																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
WINDSOR																
Whitehead Metals Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

	Bar & rod, cold rolled	Bar & rod, hot rolled	Sheet, cold rolled	Sheet, hot rolled	Coil & strip, cold rolled	Coil & strip, hot rolled	Plate	Pipe & tube, welded	Pipe & tube, seamless	Wire	Structural	Shapes, semifinished	Shapes, extruded	Shapes, roll formed	Clad	Fittings, Fasteners
FLORIDA																
HIALEAH																
Fullerton Metals Co	X		X							X						
JACKSONVILLE																
O'Neal Steel Inc			X	X			X	X	X						X	
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
J M Tull Metal & Supply Co, Inc	X	X	X				X	X	X	X	X	X	X			X
MIAMI																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
J M Tull Metal & Supply Co, Inc	X	X	X					X	X	X	X	X	X			X
TAMPA																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Fullerton Metals Co	X		X													
J M Tull Metal & Supply Co Inc	X	X	X					X	X	X	X	X	X			X
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
GEORGIA																
ATLANTA																
Atlantic Steel Co, Warehouse Div	X	X	X	X	X	X	X	X	X	X	X					
Caine Steel Co	X	X	X	X	X	X	X									
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Conklin Tin Plate & Metal Co			X													
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Hubbell Metals Inc	X	X									X					
O'Neal Steel Inc			X	X			X	X	X						X	
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
J M Tull Metal & Supply Co Inc	X	X	X				X	X	X	X	X	X	X			X
MARIETTA																
Hubbell Metals Inc	X	X	X					X								
SAVANNAH																
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
HAWAII																
HONOLULU																
ESCO Corp	X	X	X	X			X	X	X	X	X					X
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
Lacy Mfg Co	X		X				X	X	X							
ILLINOIS																
BROADVIEW																
Jessop Steel Co, Steel Warehouse Div	X	X		X		X	X				X					
Production Steel Co	X	X	X	X	X		X	X	X	X		X				
CHICAGO																
Alloys Steel Co	X	X														
Caine Steel Co	X	X	X	X	X	X	X									
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Chicago Steel Service Co	X	X	X		X		X	X	X	X	X	X	X	X	X	X
Chicago Tube and Iron Co								X	X							
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Fullerton Metals Co	X	X	X		X		X	X	X							
General Steel Warehouse Co, Inc			X													
Jessop Steel Co, Steel Warehouse Div	X	X	X	X	X		X	X	X	X	X	X	X		X	
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Service Steel Div, Van Pelt Corp								X	X							X
Steel Sales Corp	X	X	X		X		X			X						X
Standard Steel & Wire Corp	X		X		X			X					X			
Universal-Cyclops Steel Corp	X	X								X						
U S Steel Supply Div	X	X	X				X	X	X							
FRANKLIN PARK																
Precision Steel Warehouse Inc					X											X
C A Roberts								X	X							X
Benjamin Wolff and Co			X	X	X	X	X									
MELROSE PARK																
Peterson Steels Inc	X	X														
Universal-Cyclops Steel Corp	X	X								X						
MOLINE																
U S Steel Supply Div	X	X	X					X	X	X						
ROCKFORD																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
INDIANA																
FORT WAYNE																
American Steel Supply Co			X	X												
INDIANAPOLIS																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	X
Hubbell Metals Inc	X	X	X		X						X					X
C A Roberts Co								X	X							X
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Steel Sales Corp	X	X	X		X		X			X						X
Universal-Cyclops Steel Corp	X	X								X						
KANSAS																
WICHITA																
Industrial Metals Inc	X	X	X		X		X	X		X		X			X	
Earle M Jorgensen Co	X	X	X	X	X	X	X	X		X	X	X			X	
Marsh Steel & Aluminum Co			X	X			X									
Metal Goods Corp	X	X	X					X		X	X	X				
KENTUCKY																
ASHLAND																
Mansbach Steel Co															X	

Stainless Steel Distributors

	Bar & rod, cold rolled	Bar & rod, hot rolled	Sheet, cold rolled	Sheet, hot rolled	Coil & strip, cold rolled	Coil & strip, hot rolled	Plate	Pipe & tube, welded	Pipe & tube, seamless	Wire	Structural	Shapes, semifinished	Shapes, extruded	Shapes, roll formed	Clad	Fittings, Fasteners
LOUISVILLE																
Hubbell Metals Inc	X	X	X		X						X					
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	
Neill La Vielle Supply Co	X	X														
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
Williams and Co Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LOUISIANA																
BATON ROUGE																
Marsh Steel & Aluminum Co			X	X			X									
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X	X	X			
LAFAYETTE																
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X	X	X			
NEW ORLEANS																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X	X	X			
Standard Supply & Hardware Co, Inc									X							
SHREVEPORT																
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X	X	X			
MAINE																
AUBURN																
Brown-Wales Co	X	X	X	X			X	X				X		X		X
MARYLAND																
BALTIMORE																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Hill-Chase Steel Co of Maryland	X	X	X	X	X	X	X							X		
Horace T Potts Co	X	X	X	X			X	X	X		X	X				X
Steel Specialties, Inc	X		X				X									X
U S Steel Supply Div	X	X	X				X	X	X							
Whitehead Metals Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MASSACHUSETTS																
AUBURN																
Brown-Wales Co	X	X	X	X			X	X				X		X		X
BOSTON																
Brown-Wales Co	X	X	X				X	X	X	X						
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
U S Steel Supply Div	X	X	X				X	X	X							
CAMBRIDGE																
Austin-Hastings Co, Inc	X	X	X	X	X			X	X							
Brown-Wales Co	X	X	X	X			X	X				X		X		X
Industrial Stainless Steels Inc	X	X	X	X			X	X	X	X				X		X
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FALL RIVER																
The Congdon & Carpenter Co	X		X				X									
FRAMINGHAM																
Lothrop Stainless Steel, Inc	X	X	X	X	X	X	X	X	X	X		X	X	X	X	
NATICK																
The Congdon & Carpenter Co	X		X				X									
SPRINGFIELD																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
WORCESTER																
Austin-Hastings Co, Inc	X	X														
Geo F Blake Inc	X		X													
Brown-Wales Co	X	X	X				X	X	X	X						
Universal-Cyclops Steel Corp	X	X								X						
MICHIGAN																
DETROIT																
Alloy Steels Inc	X	X														
Chase Metals Service Div	X	X	X		X		X	X	X	X		X	X	X	X	X
Copper and Brass Sales Inc	X	X	X	X	X	X							X			
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Huron Steel Co, Inc	X															
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	
Osco Steel Co	X	X	X													
Production Steel Products Co	X	X	X	X	X	X	X				X					
C A Roberts Co									X	X						X
Rolled Alloys Inc		X	X	X			X	X	X	X			X			
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Service Steel Div, Van Pelt Corp								X	X							X
Steel Sales Corp	X	X	X		X		X			X						X
Universal-Cyclops Steel Corp	X	X								X						
GRAND RAPIDS																
Copper and Brass Sales Inc	X	X	X	X	X	X							X			X
Crucible Steel Co of America	X	X	X		X		X	X			X	X				
HAZEL PARK																
Meier Brass & Aluminum Co	X	X	X		X											
KALAMAZOO																
Kalamazoo Mill Supply Co	X	X	X	X	X	X	X				X					
LANSING																
Jacklin Steel Supply Co	X	X	X	X												
MINNESOTA																
MINNEAPOLIS																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Fullerton Metals Co	X		X													
Steel Sales Corp	X	X	X		X		X			X						X
Vincent Brass & Aluminum Co, Inc	X		X		X											
ST PAUL																
Caine Steel Co	X	X	X	X	X	X	X									
*Paper Calmerson & Co	X	X	X	X		X	X		X	X	X					
U S Steel Supply Div	X	X	X				X	X	X							
Villaume Steel Co	X		X													
MISSISSIPPI																
JACKSON																
O'Neal Steel, Inc			X	X			X	X	X							X
MISSOURI																
KANSAS CITY																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Hubbell Metals Inc	X	X	X		X		X	X			X					X
Industrial Metals Inc	X	X	X		X		X	X	X		X				X	
Jos T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

	Bar & rod, cold rolled	Bar & rod, hot rolled	Sheet, cold rolled	Sheet, hot rolled	Coil & strip, cold rolled	Coil & strip, hot rolled	Plate	Pipe & tube, welded	Pipe & tube, seamless	Wire	Structural	Shapes, semifinished	Shapes, extruded	Shapes, roll formed	Clad	Fittings, Fasteners
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
C A Roberts Co	X							X	X							X
NORTH KANSAS CITY																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
C A Roberts Co								X	X							
Marsh Steel & Aluminum Co			X	X			X									
ST LOUIS																
Caine Steel Co	X	X	X	X	X	X	X									
Chase Metals Service Div	X	X	X		X		X	X	X		X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Hubbell Metals Inc	X	X	X		X		X	X	X		X					X
Industrial Metals Inc	X	X	X		X		X	X	X		X				X	
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
C A Roberts Co	X							X	X							X
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Steel Sales Corp	X	X	X		X		X			X						X
Universal-Cyclops Steel Corp	X	X							X							
U S Steel Supply Div	X	X	X				X	X	X							
NEBRASKA																
OMAHA																
Gate City Steel Inc, Omaha	X		X	X												
Marsh Steel & Aluminum Co			X	X			X									
NEW JERSEY																
CALDWELL																
Fagersta Steels Inc		X			X			X								
CARLSTADT																
Julius Blum & Co, Inc								X								X
ELIZABETH																
A B Murray Co, Inc								X	X							X
Schnitzer Alloy Products Co	X							X		X						X
HARRISON																
Crucible Steel Co of America	X	X	X	X	X	X	X	X		X						
Whitehead Metals Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HILLSIDE																
Miller Steel Co Inc	X	X	X		X		X	X	X							
JERSEY CITY																
Bright Steel Corp	X	X	X		X		X	X	X		X		X			
Jos T Ryerson & Son Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
KENILWORTH																
Jones & Laughlin Stainless & Strip Div	X		X		X											
LYNDHURST																
Peter A Frasse & Co, Inc	X	X	X		X		X	X	X	X						X
NEWARK																
Patriarche & Bell Inc										X						
Horace T Potts Co	X	X	X	X			X	X	X		X	X				X
U S Steel Supply Div	X	X	X				X	X	X							
NEW BRUNSWICK																
Morrison Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PERTH AMBOY																
Abarry Steel Co	X	X	X	X			X									
ROSELLE																
The Berry Steel Corp			X		X											X
SOUTH PLAINFIELD																
David Smith Steel Co, Inc	X	X	X	X			X		X	X	X		X		X	
SOUTH RIVER																
Rolled Alloys Inc		X	X	X			X	X	X	X			X			
SPRINGFIELD																
Universal-Cyclops Steel Corp	X	X								X						
UNION																
Mapes & Sprowl Steel Co	X	X	X	X	X	X	X				X					
Peterson Steels, Inc	X	X						X								
WEST CALDWELL																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
NEW MEXICO																
ALBUQUERQUE																
Marsh Steel & Aluminum Co			X	X			X									
NEW YORK																
ALBANY																
The Woodward Co			X	X												
BRONX																
Atlas Steel Supply Corp				X			X									
BROOKLYN																
Hamsley, Inc	X	X														
David Smith Steel Co, Inc	X	X	X	X			X		X	X	X		X		X	
Schwartz & Cohn Inc			X	X	X											
BUFFALO																
Beals McCarthy & Rogers Inc			X													
Bruce-Mueller-Huntley Inc	X	X	X				X									
Crucible Steel Co of America	X	X	X		X		X	X			X					
Peter A Frasse & Co, Inc	X	X	X		X		X	X		X	X					X
Industrial Stainless Steels Inc	X	X	X	X	X	X	X	X		X			X	X		
C M Johnston Co, Inc	X	X	X	X	X		X			X						
Kencroft Associates Inc	X	X	X		X			X		X						
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Service Steel Div, Van Pelt Corp								X	X							X
Stanley Steel Service Corp	X							X	X							
Universal Steel Cyclops Corp	X	X								X						
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LONG ISLAND CITY																
K & S Metal Supply, Inc	X		X	X	X											
MASPETH																
Chase Metals Service Div	X	X	X		X		X	X	X	X			X	X	X	
E D Giberson & Co, Inc								X	X							
MONROE																
*Columbia Steel & Brass Corp								X	X		X					
NEW YORK CITY																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
G A Feld Co			X	X												
Peter A Frasse & Co, Inc	X	X	X		X		X	X	X	X						X
Patriarche & Bell, Inc										X						
Horace T Potts	X	X	X	X			X	X	X		X	X				X
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X				X	
Universal-Cyclops Steel Corp	X	X								X						
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ROCHESTER																
Bruce-Mueller-Huntley, Inc			X													

	Bar & rod, cold rolled	Bar & rod, hot rolled	Sheet, cold rolled	Sheet, hot rolled	Coil & strip, cold rolled	Coil & strip, hot rolled	Plate	Pipe & tube, welded	Pipe & tube, seamless	Wire	Structural	Shapes, semifinished	Shapes, extruded	Shapes, roll formed	Clad	Fittings, Fasteners
SYRACUSE																
Brace-Mueller-Huntley, Inc	X	X	X				X									
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Peter A Frasse & Co, Inc	X	X	X		X		X	X	X	X						X
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
NORTH CAROLINA																
CHARLOTTE																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Hubbell Metals, Inc								X								
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Vance Iron & Steel Co	X	X	X				X	X			X					
GREENSBORO																
Carolina Steel Corp	X	X	X	X			X									
RALEIGH																
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
OHIO																
AKRON																
Wm M Orr Co, Inc	X	X	X	X	X			X	X	X						X
CINCINNATI																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
The Cincinnati Steel Products Co			X				X									
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Service Steel Div, Van Pelt Corp								X	X							X
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CLEVELAND																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Chase Metals Service Div	X	X	X	X	X		X	X	X	X	X		X	X	X	
Copper and Brass Sales, Inc	X	X	X	X	X	X							X			X
Crucible Steel Co of America	X	X	X		X		X	X			X	X				
The Decker-Reichert Steel Co			X	X				X								X
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X				X	X	X		X	
Hammond Tube Co								X	X							
Osco Steel Co	X	X	X		X		X			X						
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							
Universal-Cyclops Steel Corp	X	X								X						
Viking Steel Co	X	X	X	X	X		X	X		X	X				X	
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
COLUMBUS																
Williams and Co, Inc	X	X	X	X			X	X	X	X	X	X				
COSHOCTON																
Universal-Cyclops Steel Corp					X	X										
DAYTON																
Alloy Steels, Inc	X	X														
Carpenter Steel Co	X	X														
Universal-Cyclops Steel Corp	X	X								X						
GALION																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
TOLEDO																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
YOUNGSTOWN																
Hynes Steel Products Co			X	X	X	X										
OKLAHOMA																
OKLAHOMA CITY																
C A Russell, Inc								X	X							
TULSA																
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Industrial Metals, Inc	X	X	X		X		X	X	X		X				X	
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
Marsh Steel & Aluminum Co			X	X			X									
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
C A Roberts Co	X							X	X							X
OREGON																
EUGENE																
American Steel & Supply Co			X													
ESCO Corp	X		X					X								X
MEDFORD																
American Steel & Supply Co			X													
PORTLAND																
Alaskan Copper & Brass Co	X	X	X	X				X	X	X	X				X	X
American Steel Warehouse Co			X													
Crucible Steel Co of America	X	X	X		X		X	X			X	X				
Eagle Metals, Inc of Oregon	X	X	X		X		X	X	X	X	X		X		Y	
ESCO Corp	X	X	X	X	X		X	X	X	X	X	X	X	X		X
Pacific Machinery & Tool Steel Co	X															
Pacific Metal Co	X	X	X		X			X				X				
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							
PENNSYLVANIA																
BRIDGEVILLE																
Universal-Cyclops Steel Corp	X	X									X					
BRISTOL																
A B Murray Co, Inc								X	X							X
CARNEGIE																
Jos T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ERIE																
Crucible Steel Co of America	X	X	X	X	X	X	X	X			X					
The Decker-Reichert Steel Co			X	X				X								X
HARRISBURG																
Penn-Harris Steel Co	X	X	X	X	X		X	X	X	X	X					
McKEESPORT																
A B Murray Co, Inc								X	X							X
PHILADELPHIA																
Athos Steel Service	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Caine Steel Co	X	X	X	X	X	X	X									
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Peter A Frasse & Co, Inc	X	X	X		X		X	X	X	X						X
Potts-Farrington Co	X	X	X	X	X		X			X	X	X				
Horace T Potts Co	X	X	X				X	X	X		X	X				
Reliable Stainless Steel Supply Corp	X	X	X	X	X	X	X	X	X							
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Steel Distributors, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
Universal-Cyclops Steel Corp	X	X								X						
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							
PITTSBURGH																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X	X		X		X	X					
William M Orr Co, Inc	X	X	X	X	X		X	X	X	X			X	X		X
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Universal-Cyclops Steel Corp	X	X									X					
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

	Bar & rod, cold rolled	Bar & rod, hot rolled	Sheet, cold rolled	Sheet, hot rolled	Coil & strip, cold rolled	Coil & strip, hot rolled	Plate	Pipe & tube, welded	Pipe & tube, seamless	Wire	Structural	Shapes, semifinished	Shapes, extruded	Shapes, roll formed	Clad	Fittings, Fasteners
YORK																
Horace T Potts Co	X	X	X	X			X	X	X		X	X				X
RHODE ISLAND																
PROVIDENCE																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
The Congdon & Carpenter Co	X		X				X									
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
SOUTH CAROLINA																
GREENVILLE																
Atlantic Steel Co, Warehouse Div	X	X	X	X	X	X	X	X	X	X						
J M Tull Metal & Supply Co, Inc	X	X	X				X	X	X	X	X	X	X			X
TENNESSEE																
CHATTANOOGA																
O'Neal Steel Inc				X	X			X	X	X					X	
Siskin Steel & Supply Co	X	X	X	X	X	X	X	X	X	X						
Vance Iron & Steel Co	X	X	X				X	X			X					X
MEMPHIS																
Hubbell Metals, Inc	X	X	X				X				X					
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
Pidgeon-Thomas Iron Co	X		X													
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							X
NASHVILLE																
Jones & Laughlin Steel Warehouse Div	X	X	X		X		X			X	X		X		X	
Mid-State Steel, Inc			X													
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
TEXAS																
CORPUS CHRISTI																
Campbell Steel Warehouse Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
McCormick Steel Co	X		X													
BEAUMONT																
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X	X	X			
DALLAS																
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Delta Metals, Inc	X		X		X		X				X					
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
McCormick Steel Co	X		X		X		X				X					
Metal Goods Corp	X	X	X	X	X		X	X	X	X	X		X		X	X
Moncrief-Lenoir Mfg Co		X	X	X							X					
C A Russell, Inc								X		X						
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X	X	X			
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X	X						
HARLINGER																
Moncrief-Lenoir Mfg Co			X	X							X					
LUBBOCK																
Moncrief-Lenoir Mfg Co		X	X	X							X					
TEMPLE																
Moncrief-Lenoir Mfg Co		X	X	X							X					
Campbell Steel Warehouse Co		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SAN ANTONIO																
Delta Metals, Inc			X		X											
Moncrief-Lenoir Mfg Co			X	X	X						X					
Steel Products Co					X	X	X									
UTAH																
SALT LAKE CITY																
Crucible Steel Co of America	X	X	X		X		X	X			X	X				
Pacific Metals Co, Ltd	X	X	X	X	X		X	X	X	X	X	X	X	X		X
VIRGINIA																
RICHMOND																
Hill-Chase Steel Co	X	X	X	X	X	X	X								X	
Reynolds Aluminum Supply Co	X	X	X	X	X		X	X	X	X	X	X	X			X
WASHINGTON																
SEATTLE																
Alaskan Copper & Brass Co	X	X	X	X			X	X	X	X	X				X	X
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X					X		
Eagle Metals Co	X	X	X		X		X	X	X	X	X		X		X	
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X				X	
ESCO Corp	X	X	X	X	X		X	X	X	X	X	X	X	X		X
Kilsby-Tubesupply								X	X							
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							
SPOKANE																
Eagle Metals Co	X	X	X		X		X	X	X	X					X	
ESCO Corp	X		X													
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WISCONSIN																
MILWAUKEE																
A M Castle & Co	X	X	X	X	X	X	X	X	X		X	X			X	
Chase Metals Service Div	X	X	X		X		X	X	X	X	X		X	X	X	
Crucible Steel Co of America	X	X	X		X		X	X		X	X					
Fullerton Metals Co	X		X		X											
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Steel Sales Corp	X	X	X		X		X				X					X
Universal-Cyclops Steel Corp	X	X									X					
U S Steel Supply Div, U S Steel Corp	X	X	X				X	X	X							
Benjamin Wolff & Co			X	X	X	X	X									

CANADA

ALBERTA																
CALGARY																
Wilkinson Co, Ltd		X		X	X			X	X	X					X	X
EDMONTON																
Wilkinson Co, Ltd		X		X	X			X	X	X					X	X
BRITISH COLUMBIA																
VANCOUVER																
Wilkinson Co, Ltd		X		X	X			X	X	X					X	X

Aluminum Distributors

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
ALABAMA																				
BIRMINGHAM																				
Atlantic Steel Co, Warehouse Div	X	X	X	X	X	X		X	X	X	X	X	X		X					
Hinkle Supply Co, Inc	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X		
James & Armstrong Steel Co	X	X			X	X			X	X	X	X								
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X			X	X	X	X	X		X	X		X	X	X
U S Steel Supply Div, U S Steel Corp					X	X														
ARIZONA																				
PHOENIX																				
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Pacific Metals Co, Ltd	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Reliance Steel	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
ARKANSAS																				
LITTLE ROCK																				
Delta Metals Inc	X				X	X			X	X	X	X			X					
CALIFORNIA																				
BERKELEY																				
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
COMPTON																				
Benjamin Metals Co	X	X	X	X			X			X	X	X								
FRESNO																				
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
LOS ANGELES																				
Benjamin Metals Co	X	X	X	X	X	X	X	X			X	X								
Bridgeport Brass Co		X	X	X	X															
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Eureka Metals Supply Co	X	X	X	X	X	X	X		X	X										
Jessop Steel of California	X				X	X														
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Kilsby Tubesupply									X	X										
Pacific Metals Co, Ltd	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
Pioneer Aluminum Inc	X	X	X	X	X	X		X	X	X	X	X								
Reliance Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Republic Supply Co	X	X	X	X	X	X			X	X	X	X			X					
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X			X	X	X	X							X	X
Ziegler Steel Service Corp	X	X		X	X	X			X	X	X	X	X		X	X				
NATIONAL CITY																				
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
OAKLAND																				
American Brass & Copper Co	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
REDDING																				
American Steel & Supply					X	X														
SACRAMENTO																				
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
SAN DIEGO																				
Pacific Metals Co, Ltd	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
SAN FRANCISCO																				
Bridgeport Brass Co		X		X	X															
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Gilmore Steel Corp	X	X		X	X	X			X	X	X	X								
Pacific Metals Co, Ltd	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X			X	X									X	
SAN LEANDRO																				
Kilsby Tubesupply									X	X										
Republic Supply Co	X	X	X	X	X	X			X	X	X	X			X					
SANTA CLARA																				
Westates Steel & Aluminum Corp	X	X	X	X	X	X			X	X	X	X								
SANTA FE SPRINGS																				
Jessop Steel of Calif	X	X		X	X	X		X	X	X	X	X			X					
COLORADO																				
DENVER																				
ABC Metals Corp	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
M L Foss, Inc	X	X		X	X	X		X	X	X	X	X				X		X		X
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Silver Steel Co	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
CONNECTICUT																				
HARTFORD																				
American Steel & Aluminum Corp	X	X	X	X	X	X	X	X	X	X	X	X								
Peter A Frasse & Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X				X				
MILFORD																				
Edgecomb Steel of New England	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
WALLINGFORD																				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
WATERBURY																				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
WINDSOR																				
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FLORIDA																				
FT LAUDERDALE																				
Cauley Steel & Supply Co	X	X		X	X	X		X	X	X	X	X				X				
HIALEAH																				
Fullerton Metals Co	X	X		X	X	X														
JACKSONVILLE																				
O'Neal Steel, Inc	X	X	X	X	X	X		X	X	X	X	X					X			
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X		X	X	X	X	X			X	X		X	X	X
MIAMI																				
Cauley Steel & Supply Co	X	X		X	X	X		X	X	X	X	X				X				
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X			X	X	X	X	X		X	X		X	X	X
ORLANDO																				
Cauley Steel & Supply Co	X	X		X	X	X		X	X	X	X	X				X				
TAMPA																				
Fullerton Metals Co of Tampa	X	X		X	X	X														
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X			X	X	X	X	X		X	X		X	X	X
GEORGIA																				
ATLANTA																				
Atlantic Steel Co, Warehouse Div	X	X	X	X	X	X		X	X	X	X	X	X		X					
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Conklin Tin Plate & Metal Co				X					X				X	X						
Hubbell Metals, Inc	X	X			X	X			X	X	X	X			X			X		
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X			X	X	X	X	X		X	X		X	X	X
MARIETTA																				
Hubbell Metals, Inc	X	X	X	X	X	X	X		X	X	X	X			X	X				
SAVANNAH																				
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
HAWAII																				
HONOLULU																				
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Honolulu Iron Works	X	X	X	X	X	X	X			X	X	X	X		X	X				
Lacy Mfg Co			X		X	X				X		X			X					
IDAHO																				
IDAHO FALLS																				
Structural Steel & Forge Co	X	X		X	X	X			X			X	X		X	X				
TWIN FALLS																				
Structural Steel & Forge Co	X	X		X	X	X			X	X		X	X		X	X				
ILLINOIS																				
CHICAGO																				
Bridgeport Brass Co		X	X	X	X					X										
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Central Steel & Wire Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Corey Steel Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X
Fullerton Metals Co	X	X	X	X	X	X	X		X	X	X	X								
Jones & Laughlin Steel Warehouse Div	X	X	X	X	X	X	X		X	X	X	X			X					
Kaole Steel Corp	X	X	X	X	X	X	X	X	X	X	X	X			X					
Lafayette Steel & Aluminum Corp	X	X	X	X	X	X	X		X	X		X								
National Plywoods Inc					X															
C A Roberts Co					X				X	X						X				
Joseph T Ryerson & Son Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Steel Sales Corp	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X
U S Steel Supply Div, U S Steel Corp	X	X	X	X	X	X	X	X	X	X	X	X			X					
Benjamin Wolff & Co		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
EVANSTON																				
Korhumel Steel/Aluminum Co	X	X	X	X	X	X	X		X	X	X				X					
FRANKLIN PARK																				
Precision Steel Warehouse, Inc					X															
Benjamin Wolff and Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MOLINE																				
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X	X	X	X	X	X	X			X					
ROCKFORD																				
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
SKOKIE																				
J G Braun Co	X								X	X	X	X			X	X		X		X
INDIANA																				
ELKHART																				
National Plywoods Inc					X															
FT WAYNE																				
Art Iron & Wire Works	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
INDIANAPOLIS																				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Jones & Laughlin Steel Warehouse Div	X	X	X	X	X	X	X		X	X	X	X	X		X					
Hubbell Metals, Inc	X	X		X	X	X			X	X	X	X			X			X		
F H Langsenkamp Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X			X		
C A Roberts Co				X					X	X						X				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Steel Sales Corp	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X
SOUTH BEND																				
Kaole Steel Corp	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
KANSAS																				
WICHITA																				
*General Metals, Inc	X	X	X	X	X	X	X		X	X		X	X		X	X				
Industrial Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
KENTUCKY																				
LOUISVILLE																				
Hubbell Metals, Inc	X	X			X							X	X					X		
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LOUISIANA																				
BATON ROUGE																				
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
Standard Brass & Mfg Co	X	X	X	X	X	X			X	X		X	X	X	X				X	X
LAFAYETTE																				
Standard Brass & Mfg Co							X	X												
NEW ORLEANS																				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Standard Brass & Mfg Co	X	X	X	X	X	X	X		X	X		X	X	X	X			X	X	
SHREVEPORT																				
Standard Brass & Mfg Co	X	X	X	X	X	X	X		X	X		X	X	X	X			X	X	
MAINE																				
PORTLAND																				
F Corey & Co																				

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
MARYLAND																				
BALTIMORE																				
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
*Clendenin Bros, Inc	X	X		X	X	X			X	X	X	X	X	X	X			X		
Hill Chase Steel Co of Maryland	X	X	X	X	X	X	X		X	X	X	X	X		X					
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MASSACHUSETTS																				
BOSTON																				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Eastern Metal Mill Prdts Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Herrick Company					X								X					X		
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
U S Steel Supply Div, U S Steel Corp					X	X														
CAMBRIDGE																				
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FALL RIVER																				
The Congdon & Carpenter Co	X	X		X	X	X		X			X	X								
NATICK																				
Congdon & Carpenter Co	X	X		X	X	X		X			X	X								
SEEKONK																				
Tower Iron Works	X	X	X	X	X	X	X		X	X	X	X			X	X				
SOMERVILLE																				
Zurbach Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
WALTHAM																				
Industrial Aluminum	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
MICHIGAN																				
DETROIT																				
Alloy Steels, Inc	X	X	X	X	X	X	X		X	X	X	X			X	X				
Central Steel & Wire Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Copper and Brass Sales, Inc	X	X	X	X	X	X	X	X	X	X	X	X			X			X		
Kasle Steel Corp	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Osco Steel Co	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
C A Roberts Co				X					X	X						X				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Steel Sales Corp	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X
GRAND RAPIDS																				
Copper and Brass Sales, Inc	X	X	X	X	X	X	X	X	X	X	X	X			X			X		
Kasle Steel Corp	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
HAZEL PARK																				
Meier Brass & Aluminum Co	X	X	X	X	X	X		X	X	X	X	X	X	X	X					X
JACKSON																				
Alro Steel Corp	X	X		X	X						X									
Smith Winchester Co					X															
KALAMAZOO																				
Kalamazoo Mill Supply Co	X	X		X	X	X					X	X								
MINNESOTA																				
MINNEAPOLIS																				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Fullerton Metals Co	X	X	X	X	X	X	X		X	X	X									
Korhumel Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X			X	X				
Steel Sales Corp	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X
Vincent Brass & Aluminum Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X		X			X		
ST PAUL																				
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X					X									
MISSOURI																				
KANSAS CITY																				
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Hubbell Metals, Inc	X	X	X	X	X	X	X		X	X	X	X			X			X		
Industrial Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
*Richards & Conover Steel Div.					X						X	X								
C A Roberts Co				X					X	X						X				
ST LOUIS																				
Bridgeport Brass Co		X		X	X						X	X			X		X	X		
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Hubbell Metals Inc	X	X	X	X	X	X	X		X	X	X	X			X	X		X		
Industrial Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C A Roberts Co				X					X	X						X				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Steel Sales Corp	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X	X	X			X		X							
NEBRASKA																				
COLUMBUS																				
Gate City Steel	X	X		X	X	X					X	X			X					
OMAHA																				
Gate City Steel, Inc	X	X		X	X	X					X	X			X					
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
NEW HAMPSHIRE																				
NASHUA																				
Edgcomb Steel of New England	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
NEW JERSEY																				
CARLSTADT																				
Julius Blum & Co, Inc	X	X							X	X	X	X			X	X				
ELIZABETH																				
Adam Metal Supply	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
Fort Duquesne Steel Co					X						X	X								
A B Murray Co, Inc									X	X										
HARRISON																				
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HILLSIDE																				
Edgcomb Steel and Aluminum Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
KENILWORTH																				
Jones & Laughlin Steel Corp				X																
LINDEN																				
R Campbell Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X								
LYNDHURST																				
Peter A Frasse & Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X						X		
A R Purdy Co, Inc	X	X		X	X	X	X				X	X			X					
NEWARK																				
Bridgeport Brass Co		X		X	X					X	X									
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X	X	X	X	X	X	X								
NEW BRUNSWICK																				
Morrison Steel Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				
SOUTH PLAINFIELD																				
David Smith Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				
UNION																				
Mapes & Sprowl Steel Co.	X	X	X	X	X	X	X	X	X	X	X	X	X		X					

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
NEW MEXICO																				
Albuquerque																				
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
Silver Steel Co	X	X			X	X			X	X	X	X								
NEW YORK																				
ALBANY																				
Brace-Mueller-Huntley, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				
The Woodward Co					X															
BAYSHORE																				
H Verby Co, Inc					X															
BROOKLYN																				
David Smith Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				
Strahs Aluminum Co	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X
BRONX																				
Atlas Supply Co, Inc					X															
BUFFALO																				
Brace-Mueller-Huntley, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				
Enos & Sanderson Co, Inc					X				X	X	X	X	X		X			X		
Ernst Iron Works	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Peter A Frasse & Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X					X			
Seneca Steel Service Inc	X	X		X	X	X	X	X	X	X	X	X					X		X	
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Whitehead Metals Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
FAR ROCKAWAY																				
H Verby Co, Inc					X															
JAMAICA																				
H Verby Co, Inc					X															
LONG ISLAND CITY																				
Thypin Steel Co, Inc						X														
MASPETH																				
Chase Metals Service Div	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
MONROE																				
*Columbia Steel & Brass Corp									X	X		X								
NEW YORK																				
Adam Metal Supply Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
J G Braun Co	X								X	X	X	X		X	X	X		X		X
Bridgeport Brass Co		X		X	X															
J E Conklin Brass & Copper Co, Inc	X	X	X	X	X	X	X		X	X	X	X	X		X	X				
Peter A Frasse & Co, Inc	X	X	X	X	X	X	X	X	X	X							X			
**Olin Mathieson Metals Div																				
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ROCHESTER																				
Adam Metal Supply Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
Brace-Mueller-Huntley, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				
SYRACUSE																				
Brace-Mueller-Huntley, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				
Peter A Frasse & Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X					X			
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
NORTH CAROLINA																				
CHARLOTTE																				
Edgcomb Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
Hubbell Metals Inc	X	X			X						X	X			X					
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Vance Iron & Steel Co					X															
GREENSBORO																				
Edgcomb Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
RALEIGH																				
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
OHIO																				
AKRON																				
Good Supply & Equipment Co									X											
Wm M Orr Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X								
CINCINNATI																				
Central Steel & Wire Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
The Cincinnati Steel Pdts Co	X	X		X	X	X					X	X							X	
Jones & Laughlin Steel Warehouse Div	X	X	X	X	X	X	X		X	X	X	X	X		X					
Morrison Drabner Steel Co	X	X	X	X	X	X	X		X	X	X	X			X	X				
Mutual Mfg & Supply Co	X	X	X	X	X	X	X		X	X	X	X			X					
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CLEVELAND																				
Bridgeport Brass Co		X		X	X															
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					X
Chase Metal Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Copper and Brass Sales, Inc	X	X	X	X	X	X	X	X	X	X	X	X			X			X		
Jones & Laughlin Steel Warehouse Div	X	X	X	X	X	X	X		X	X	X	X	X		X					
Kasle Steel Corp	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Osco Steel Co	X	X	X	X	X	X	X				X	X								
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
U S Steel Supply Div, U S Steel Corp	X	X		X	X	X		X	X	X	X	X								
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Universal Steel Co	X	X		X	X	X			X		X	X			X					
COLUMBUS																				
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DAYTON																				
Alloy Steels, Inc	X	X	X	X	X	X	X		X	X	X	X			X	X				
GALION																				
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
TOLEDO																				
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
YOUNGSTOWN																				
Hynes Steel Products					X							X								
OKLAHOMA																				
TULSA																				
Bridgeport Brass Co					X					X										
Industrial Metals, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
Marsh Steel & Aluminum Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X	X
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
C A Roberts Co				X					X	X						X				
Schill Steel Co	X	X		X	X	X			X	X	X	X	X	X	X	X				
OREGON																				
EUGENE																				
American Steel & Supply					X	X														
MEDFORD																				
American Steel & Supply					X	X														
PORTLAND																				
Alaskan Copper & Brass Co	X	X		X	X				X	X	X	X								
American Steel Whse Co					X	X														
Eagle Metals, Inc of Oregon	X	X		X	X	X			X	X	X	X	X		X	X		X		
Gilmore Steel Corp	X	X		X	X	X			X	X	X	X	X							
U S Steel Supply Div, U S Steel Corp					X	X														

Nonferrous Distributors

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
ROSEBURG																				
American Steel & Supply					X	X														
PENNSYLVANIA																				
BALA CYNWYD																				
U S Steel Supply Div, U S Steel Corp	X	X	X	X	X	X	X	X		X	X	X	X			X	X			
BRISTOL																				
A B Murray Co, Inc									X	X										
HARRISBURG																				
Penn-Harris Steel Co	X	X	X	X	X	X	X	X	X	X	X	X			X	X				
McKEESPORT																				
Lockhart Iron & Steel Co	X	X		X	X	X				X	X	X	X		X					
A B Murray Co, Inc									X	X										
PHILADELPHIA																				
**Aluminum Supply Corp																				
Athos Steel Service	X	X	X		X	X				X	X	X	X		X		X	X		
Bridgeport Brass Co		X		X	X															
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Edgcomb Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Peter A Frasse & Co, Inc	X	X	X	X	X	X	X	X	X	X	X						X			
Hill-Chase & Co, Inc	X	X		X	X	X	X	X	X	X	X				X	X				
Merchant & Evans Co	X	X		X	X	X	X		X	X	X	X			X					
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Steel Distributors Inc, U S Steel Corp	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X			
U S Steel Supply Div	X	X		X	X	X	X	X	X	X	X	X								
Whitehead Metals Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PITTSBURGH																				
Chase Metal Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Fort Duquesne Steel Co					X				X	X										
William M Orr Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X			X					X
Pennsylvania Industrial Supplies Co Inc	X	X	X	X	X	X		X	X	X	X	X			X	X	X			
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
YORK																				
Edgcomb Steel Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
RHODE ISLAND																				
PROVIDENCE																				
Bridgeport Brass Co		X		X	X															
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
The Congdon & Carpenter Co	X	X		X	X	X		X			X	X								
SLATERSVILLE																				
Edgcomb Steel of New England	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SOUTH CAROLINA																				
GREENVILLE																				
Atlantic Steel Co	X	X	X	X	X	X		X	X	X	X	X	X		X					
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X			X	X	X	X	X		X	X		X	X	X
TENNESSEE																				
CHATTANOOGA																				
Vance Iron & Steel Co	X	X			X	X			X		X	X								
MEMPHIS																				
Hubbell Metals, Inc	X	X			X	X	X		X	X	X							X		
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		
U S Steel Supply Div, U S Steel Corp					X	X														
KNOXVILLE																				
Steel Supply Co	X	X		X	X	X			X	X	X	X	X							
NASHVILLE																				
Mid-State Steel, Inc					X															
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		
TEXAS																				
ARLINGTON																				
U S Steel Supply Div, U S Steel Corp	X	X	X	X	X	X	X		X	X	X	X			X	X				
BEAUMONT																				
Standard Brass & Mfg Co	X	X	X	X	X	X			X	X	X	X	X	X	X			X	X	
DALLAS																				
Bridgeport Brass Co		X		X	X															
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Delta Metals, Inc	X				X	X	X		X	X	X	X			X	X		X		
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X	X		X					
McCormick Steel Co	X	X	X	X	X	X	X	X	X	X	X	X								
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Moncrief Lenoir Mfg Co	X			X	X						X				X					
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
U S Steel Supply Div, U S Steel Corp					X	X														
HARLINGEN																				
Moncrief Lenoir Mfg Co					X															
HOUSTON																				
Allied Metals, Inc	X	X	X	X	X	X		X	X		X	X	X	X	X	X				X
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X		X	X	X		X					
McCormick Steel Co	X	X	X	X	X	X		X	X		X	X	X							
Metals Goods Corp	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
Moncrief Lenoir Mfg Co	X			X	X						X				X					
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Schill Steel Co	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
Standard Brass & Mfg Co	X	X	X	X	X	X			X	X	X	X	X	X	X			X	X	
LUBBOCK																				
Moncrief Lenoir Mfg Co					X															
SAN ANTONIO																				
Delta Metals, Inc	X				X	X					X	X			X					
Moncrief Lenoir Mfg Co	X				X						X				X					
TEMPLE																				
Moncrief Lenoir Mfg Co					X															
UTAH																				
SALT LAKE CITY																				
Pacific Metals Co, Ltd	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
Silver Steel Co	X	X			X	X			X	X	X	X								
Structural Steel & Forge Co	X	X		X	X	X			X		X	X			X	X				
VIRGINIA																				
RICHMOND																				
Hill Chase Steel Co	X	X	X	X	X	X	X		X	X	X	X	X		X					
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		
*Reynolds Metals Co	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				X

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
WASHINGTON																				
SEATTLE																				
Alaskan Copper & Brass Co	X	X		X	X				X	X	X	X								
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
Eagle Metals Co	X	X		X	X	X			X	X	X	X			X	X		X		
Earle M Jorgensen Co	X	X	X	X	X	X	X	X	X	X	X	X			X					
Kilsby Tubesupply									X	X										
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
Joseph T Ryerson & Son Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
U S Steel Supply Div, U S Steel Corp					X	X														
SPOKANE																				
Eagle Metals Co	X	X	X	X	X	X	X		X	X	X	X			X	X				
Reynolds Aluminum Supply of Calif	X	X		X	X	X	X		X	X	X	X	X	X	X	X				
WISCONSIN																				
MILWAUKEE																				
A M Castle & Co	X	X		X	X	X	X	X	X	X	X	X			X					
Central Steel & Wire Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X		
Fullerton Metals of Wisconsin	X	X	X	X	X	X	X		X	X	X									
Lewis Steel Co	X	X	X	X	X	X			X	X	X	X								
Joseph T Ryerson & Son, Inc	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Steel Sales Corp	X	X	X	X	X	X	X	X	X	X	X	X			X		X		X	X
U S Steel Supply Div, U S Steel Corp					X	X														
Benjamin Wolff & Co	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
WYOMING																				
ROCK SPRINGS																				
Structural Steel & Forge Co	X	X		X	X	X			X			X	X			X				

CANADA

	Bar	Rod	Wire	Screw Mach Stock	Sheet	Plate	Tooling Plate, Rolled	Tooling Plate, Cast	Pipe	Tube	Shapes Extruded	Shapes Structural	Industrial Bldg Prods	Residential Bldg Prods	Architectural Prods	Handrailings	Electrical Conductor	Rivets	Ingot	Welding, Brazing Prods
ALBERTA																				
CALGARY																				
Wilkinson Co, Ltd	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X	X	
EDMONTON																				
Wilkinson Co, Ltd	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X	X	
BRITISH COLUMBIA																				
VANCOUVER																				
Wilkinson Co, Ltd	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X	X	
MANITOBA																				
WINNEPEG																				
Alloy Metal Sales, Ltd	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X		X
ONTARIO																				
TORONTO																				
Alloy Metal Sales, Ltd	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X		X
QUEBEC																				
MONTREAL																				
Alloy Metal Sales, Ltd	X	X	X	X	X	X	X		X	X	X	X	X		X	X		X		X

Copper & Brass Distributors

	Bar	Rod	Sheet	Strip	Plate	Pipe	Tube	Wire	Shapes Drawn	Shapes Extruded	Welding, Brazing Prods
ALABAMA											
BIRMINGHAM											
Hinkle Supply Co, Inc	X	X	X	X	X	X	X				
O'Neal Steel, Inc	X	X		X							
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
ARIZONA											
PHOENIX											
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X
Pacific Metals Company, Ltd	X	X	X	X		X	X		X	X	X
Reynolds Aluminum Supply of Calif	X	X	X								
CALIFORNIA											
BERKELEY											
A M Castle & Co	X	X									
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	
FRESNO											
Reynolds Aluminum Supply of Calif	X	X	X								
HUNTINGTON PARK											
AMPCO Metal, Inc	X	X	X	X	X	X	X			X	X
LOS ANGELES											
Bralco Metals, Inc	X	X	X	X	X			X	X	X	
E Jordan Brookes Co	X	X	X	X						X	
A M Castle & Co	X	X									
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X
Eureka Metals Supply Co	X	X	X	X			X	X			
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Pacific Metals Co, Ltd	X	X	X	X		X	X		X	X	X
Reading Tube Corp							X				

	Bar	Rod	Sheet	Strip	Plate	Pipe	Tube	Wire	Shapes Drawn	Shapes Extruded	Welding, Brazing Prods
Reynolds Aluminum Supply of Calif	X	X	X								
Ziegler Steel Service Corp			X	X							
NATIONAL CITY											
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	X
OAKLAND											
American Brass & Copper Co	X	X	X	X	X	X	X	X			
Reading Tube Corp							X				
REDDING											
American Steel & Supply	X	X	X	X		X	X				
SACRAMENTO											
Reynolds Aluminum Supply of Calif	X	X	X								
SAN DIEGO											
Pacific Metals Company, Ltd	X	X	X	X		X	X		X	X	X
Reynolds Aluminum Supply of Calif	X	X	X								
SAN FRANCISCO											
A M Castle & Co	X	X									
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
E Jordan Brookes Co	X	X	X	X						X	
R J Leahy Co	X	X	X	X	X	X	X	X	X	X	X
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Pacific Metals Co, Ltd	X	X	X	X		X	X		X	X	X
Reynolds Aluminum Supply of Calif	X	X	X								
COLORADO											
DENVER											
Anaconda American Brass Co		X	X	X		X	X				
M L Foss, Inc	X	X	X	X	X	X	X	X	X	X	X
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Reading Tube Corp							X				
CONNECTICUT											
BRIDGEPORT											
The Chapin & Bange Co	X	X	X	X						X	
BRISTOL											
The Bristol Brass Corp	X	X	X	X				X		X	
HARTFORD											
C S Mersick & Co							X				
MERIDEN											
**The Miller Co											
MILFORD											
Edgcomb Steel of New England Inc	X	X		X							
NEW HAVEN											
C S Mersick & Co							X				
SEYMOUR											
**The New Haven Copper Co											
WATERBURY											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
**Waterbury Rolling Mills, Inc											
WINDSOR											
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
DISTRICT OF COLUMBIA											
WASHINGTON											
Atlantic Copper & Brass Co	X	X	X	X	X	X	X	X	X	X	X
FLORIDA											
HIALEAH											
Fullerton Metals Co	X	X	X	X							
JACKSONVILLE											
O'Neal Steel, Inc	X	X		X							
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
MIAMI											
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
TAMPA											
Anaconda American Brass Co			X			X	X				
Fullerton Metals Co	X	X	X	X							
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
GEORGIA											
ATLANTA											
Anaconda American Brass Co		X	X	X		X	X				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Conklin Tin Plate & Metal Co	X		X			X					
Hubbell Metals, Inc	X	X	X	X		X	X				
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Reading Tube Corp							X				
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
SAVANNAH											
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
HAWAII											
HONOLULU											
Lacy Manufacturing Co	X		X	X			X				
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
ILLINOIS											
BROADVIEW											
Bearing Hdqs Div, Ray M Ring Co	X	X		X							
CHICAGO											
Anaconda American Brass Co		X	X	X		X	X	X	X		X
The Bristol Brass Co	X	X	X	X				X		X	
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Corey Steel Co	X	X	X	X		X	X	X	X		X
Fullerton Metals Company	X	X	X	X	X		X	X	X	X	
Guardian Metal Sales	X	X	X	X						X	
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Meier Bearing Alloys, Inc	X	X	X	X	X		X			X	
Reading Tube Corp							X				
Steel Sales	X	X	X	X	X	X	X	X			X
EAST ALTON											
**Olin Mathieson Chem Corp, Western Brass Mills Div											
FRANKLIN PARK											
A M Castle & Co	X	X									
Precision Steel Warehouse, Inc			X	X							

	Bar	Rod	Sheet	Strip	Plate	Pipe	Tube	Wire	Shapes Drawn	Shapes Extruded	Welding, Brazing Prods
MORTON GROVE											
Bearing Hdqs Div, Ray M Ring Co	X	X		X							
ROCKFORD											
A M Castle & Co	X	X									
Bearing Hdqs Div, Ray M Ring Co	X	X		X							
SKOKIE											
J G Braun Company	X	X	X			X	X			X	
WAUKEGAN											
Bearing Hdqs Div, Ray M Ring Co	X	X		X							
INDIANA											
EAST CHICAGO											
Bearing Hdqs Div, Ray M Ring Co	X	X		X							
INDIANAPOLIS											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Hubbell Metals, Inc	X	X	X	X			X				
F H Langsenkamp Co	X	X	X	X	X	X	X	X	X	X	
Nonferrous Foundries, Inc	X	X			X						
Steel Sales	X	X	X	X	X	X	X	X			X
IOWA											
DES MOINES											
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
KANSAS											
WICHITA											
Industrial Metals, Inc	X	X	X	X	X	X	X		X		
KENTUCKY											
LOUISVILLE											
Hubbell Metals, Inc	X	X	X	X			X				
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	
LOUISIANA											
BATON ROUGE											
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
LAFAYETTE											
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
METAIRIE											
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
NEW ORLEANS											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
SHREVEPORT											
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
MARYLAND											
BALTIMORE											
Atlantic Copper & Brass Co	X	X	X	X	X	X	X	X	X	X	X
Brass & Copper Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
A M Castle & Co	X	X									
*Clendenin Bros, Inc	X	X	X	X	X	X	X	X	X	X	
The Seaboard Brass and Copper Co	X	X	X	X	X	X	X	X	X	X	X
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
MASSACHUSETTS											
BOSTON											
Chase Metals Service Division	X	X	X	X	X	X	X	X	X	X	X
Eastern Metal Mill	X	X	X	X	X	X	X	X	X	X	X
Herrick Co.	X		X	X							
Kelco Metal Pdts Co	X	X	X	X	X	X	X	X	X	X	
Millard Brass & Copper Co	X	X	X	X	X	X	X	X	X	X	X
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
CAMBRIDGE											
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
Young-Jones Co							X				
SOMERVILLE											
Admiral Brass & Copper Co, Inc	X	X	X	X	X	X	X	X	X	X	
TAUNTON											
New England Brass Co				X							
WORCESTER											
Geo F Blake, Inc	X	X	X	X	X						X
MICHIGAN											
DETROIT											
R B Carolin Foundry & Machine Co	X	X									
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Copper and Brass Sales, Inc	X	X	X	X	X	X	X	X	X	X	X
Meier Brass & Alum Co	X	X	X	X						X	
Steel Sales	X	X	X	X	X	X	X	X			X
FLINT											
*Hall Steel Co	X	X	X	X			X				
GRAND RAPIDS											
Copper and Brass Sales, Inc	X	X	X	X	X	X	X	X	X	X	X
HAZEL PARK											
Meier Brass & Aluminum Co	X	X	X	X	X	X	X	X	X	X	X
JACKSON											
Alro Steel Corp	X	X									
Smith-Winchester Co	X	X	X	X		X	X	X			
KALAMAZOO											
Kalamazoo Mill Supply Co	X	X	X	X	X			X			
LANSING											
Universal Steel Co. of Mich	X	X	X			X	X				
PORT HURON											
*Mueller Brass Co		X									
SOUTHFIELD											
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
MINNESOTA											
MINNEAPOLIS											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Eiler Equipment Co	X	X	X	X						X	
Fullerton Metals Co	X	X	X	X	X		X	X	X	X	
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Steel Sales	X	X	X	X	X	X	X	X			X
Vincent Brass & Aluminum Co, Inc	X	X	X	X	X	X	X	X	X	X	X
MISSISSIPPI											
JACKSON											
Anaconda American Brass Co		X	X	X		X	X				

Copper & Brass Distributors

	Bar	Rod	Sheet	Strip	Plate	Pipe	Tube	Wire	Shapes Drawn	Shapes Extruded	Welding, Brazing Prods
MISSOURI											
KANSAS CITY											
Anaconda American Brass Co		X	X	X		X	X				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Hubbell Metals, Inc	X	X	X	X			X				
Industrial Metals, Inc	X	X	X	X	X	X	X		X		
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
NORTH KANSAS CITY											
A M Castle & Co	X	X									
ST LOUIS											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Hubbell Metals, Inc	X	X	X	X	X	X	X	X			
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Industrial Metals, Inc	X	X	X	X	X	X	X		X		
Lewin-Mathes Co, Div of Cerro De Pasco					X	X		X	X		
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Steel Sales	X	X	X	X	X	X	X	X			X
NEW JERSEY											
HARRISON											
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
NEW BRUNSWICK											
**Triangle Conduit & Cable Co, Inc											
RIVERSIDE											
**Riverside-Alloy Metal Div, H K Porter											
TRENTON											
Barbour Bros Steel Co, Inc	X	X	X	X	X		X		X	X	
NEW MEXICO											
ALBUQUERQUE											
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
NEW YORK											
ALBANY											
The Woodward Co		X	X								
BAYSHORE											
H Verby Co, Inc			X	X							
BRONX											
Atlas Supply Co, Inc			X								
BROOKLYN											
Hamsley, Inc	X	X	X		X						
Kasper & Koetzle, Inc	X							X			X
BUFFALO											
Beals, McCarthy & Rogers, Inc	X	X	X	X	X	X	X	X	X		
Brace-Mueller-Huntley, Inc	X	X	X	X							
Kencroft Associates Inc	X	X	X	X	X	X	X	X	X	X	
The Bristol Brass Corp	X	X	X	X				X		X	
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
FAR ROCKAWAY											
H Verby Co, Inc			X	X							
FARMINGDALE											
Schwartz & Portnoy							X				
JAMAICA											
H Verby Co, Inc			X	X							
LIVERPOOL											
Ontario Metal Supply, Inc	X	X	X	X	X	X	X	X	X	X	
LONG ISLAND CITY											
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Reading Tube Corp							X				
MASPETH											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
MONROE											
*Columbia Steel & Brass Corp		X					X				
NEW YORK											
J G Braun Company	X	X	X			X	X			X	
T E Conklin Brass & Copper Co, Inc	X	X	X	X	X	X	X	X	X		
G A Feld Co			X	X							
Manhattan Brass & Copper Co, Inc	X	X	X	X	X	X	X	X	X	X	
New York Brass & Copper	X	X	X	X	X		X	X	X	X	
**Phelps Dodge Copper Products Corp											
Reading Tube Corp							X				
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
ROCHESTER											
Brace-Mueller-Huntley, Inc	X	X	X	X							
The Bristol Brass Corp	X	X	X	X				X		X	
Ontario Metal Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	
SYRACUSE											
Brace-Mueller-Huntley, Inc	X	X	X	X							
The Bristol Brass Corp	X	X	X	X				X		X	
Ontario Metal Supply Co, Inc	X	X	X	X						X	
Whitehead Metals, Inc	X	X	X	X	X	X	X	X	X	X	X
NORTH CAROLINA											
CHARLOTTE											
Anaconda American Brass Co		X	X	X		X	X				
Brass & Copper Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
Hubbell Metals Inc	X	X	X	X		X	X				
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Wolverine Tube						X	X				
DURHAM											
Scott Sales Company							X				
GREENSBORO											
Ward Steel Co		X	X	X							
GREENVILLE											
J M Tull Metal Supply Co	X	X	X	X						X	
OHIO											
AKRON											
Good Supply & Equipment Co	X	X	X	X	X	X	X				
William M Orr Co, Inc	X	X	X	X	X	X	X				
CINCINNATI											
Anaconda American Brass Co		X	X	X		X	X				X
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Reliable Castings Corp	X	X	X		X						
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X
CLEVELAND											
Alco Sales Co							X				

	Bar	Rod	Sheet	Strip	Plate	Pipe	Tube	Wire	Shapes Drawn	Shapes Extruded	Welding, Brazing Prods
Anaconda American Brass Co		X	X	X		X	X	X	X		
The Bristol Brass Corp	X	X	X	X				X		X	
A M Castle & Co	X	X									
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Copper and Brass Sales, Inc	X	X	X	X	X	X	X	X	X	X	X
The Decker-Reichert Steel Co			X								
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Reading Tube Corp							X				
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X
COLUMBUS											
Verys Brothers, Inc	X	X	X	X	X	X	X	X	X	X	
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X
DAYTON											
The Bristol Brass Corp	X	X	X	X				X		X	
Non-Ferrous Casting Co	X	X	X	X	X		X				
GALION											
A M Castle & Co	X	X									
TOLEDO											
The Seeger Brass Co	X	X	X	X	X	X	X	X	X	X	
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X
OKLAHOMA											
OKLAHOMA CITY											
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
TULSA											
Industrial Metals, Inc	X	X	X	X	X	X	X		X		
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Schill Steel Co	X	X									
OREGON											
EUGENE											
American Steel & Supply	X	X	X	X		X	X				
MEDFORD											
American Steel & Supply	X	X	X	X		X	X				
PORTLAND											
Alaskan Copper & Brass Co	X	X	X	X	X	X	X	X	X	X	X
American Steel Whse Co	X	X	X	X		X	X				
Eagle Metals, Inc of Oregon	X	X	X	X	X	X	X				
ROSEBURG											
American Steel & Supply	X	X	X	X		X	X				
PENNSYLVANIA											
BELLEFONTE											
**Titan Metal Mfg Co, Div of Cerro Corp											
ERIE											
The Decker-Reichert Steel Co			X								
HARRISBURG											
Penn-Harris Steel Co	X	X	X	X	X						
NORTH EAST											
The Electric Materials Co	X	X						X			
PHILADELPHIA											
Anaconda American Brass Co		X	X	X		X	X	X		X	X
Brass & Copper Sales	X	X	X	X						X	
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Max-Arnold Co							X				
Reading Tube Corp							X				
Whitehead Metals Inc	X	X	X	X	X	X	X	X	X	X	X
PITTSBURGH											
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
C G Hussey & Co	X	X	X	X	X	X	X	X	X	X	
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
William M. Orr Co, Inc	X	X	X	X	X	X	X	X	X	X	X
Pennsylvania Industrial Supplies Co Inc	X	X	X	X	X	X	X	X	X	X	X
Williams and Co, Inc	X	X	X	X	X	X	X	X	X	X	X
READING											
Reading Tube Corp							X				
RHODE ISLAND											
PROVIDENCE											
Anaconda American Brass Co		X	X	X		X	X	X		X	
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Clifford Metals Sales Co, Inc	X	X		X			X	X	X	X	
SOUTH CAROLINA											
GREENVILLE											
J M Tull Metal & Supply Co, Inc	X	X	X	X	X	X	X	X	X	X	X
TENNESSEE											
MEMPHIS											
Hubble Metals Inc	X	X	X	X			X				
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Pidgeon-Thomas Iron Co	X	X	X	X			X				
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
NASHVILLE											
Mid-States Steel, Inc			X								
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
TEXAS											
AUSTIN											
San Antonio Machine & Supply Co						X					
BEAUMONT											
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
CORPUS CHRISTI											
San Antonio Machine & Supply Co						X					
DALLAS											
Anaconda American Brass Co		X	X	X		X	X				
Chase Metals Service Div	X	X	X	X	X	X	X	X	X	X	X
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
McCormick Steel Company	X	X	X	X						X	
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Mencrief-Lereir Mfg Co			X	X							
Murdock Lead Co							X				
Reading Tube Corp							X				
Schill Steel Co	X	X									

	Bar	Rod	Sheet	Strip	Plate	Pipe	Tube	Wire	Shapes Drawn	Shapes Extruded	Welding, Brazing Prods
GARLAND											
Ampco Metal Inc	X	X	X	X	X	X	X			X	X
HARLINGEN											
Moncrief-Lenoir Mfg Co			X								
San Antonio Machine & Supply Co						X					
HOUSTON											
Allied Metals Inc	X	X	X	X	X	X	X				
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
McCormick Steel Co	X	X	X	X						X	
Metal Goods Corp	X	X	X	X	X	X	X	X	X	X	X
Moncrief-Lenoir Mfg Co	X	X	X	X	X	X	X			X	
Reading Tube Corp							X				
Schill Steel Company	X	X									
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
LUBBOCK											
Moncrief-Lenoir Mfg Co			X								
ODESSA											
Schill Steel Co	X	X									
PORT ARTHUR											
Standard Brass & Mfg Co	X	X	X	X	X	X	X	X	X	X	X
SAN ANTONIO											
Moncrief-Lenoir Mfg Co			X			X	X				
San Antonio Machine & Supply Co						X					
TEMPLE											
Moncrief-Lenoir Mfg Co			X								
UTAH											
SALT LAKE CITY											
Pacific Metals Co, Ltd	X	X	X	X		X	X		X	X	X
VIRGINIA											
RICHMOND											
Reynolds Aluminum Supply Co	X	X	X	X	X	X	X	X	X	X	
WASHINGTON											
BELLINGHAM											
Morse Hardware Co	X	X	X			X	X	X			X
SEATTLE											
Alaskan Copper & Brass Co	X	X	X	X	X	X	X	X	X	X	X
A M Castle & Co	X	X									
Ducommun Metals & Supply Co	X	X	X	X	X	X	X	X	X	X	
Eagle Metals Co	X	X	X	X	X	X	X				
Lewin-Mathes Co, Div of Cerro De Pasco						X	X		X	X	
Reynolds Aluminum Supply of Calif	X	X	X								
SPOKANE											
Eagle Metals Co	X	X	X	X	X	X	X				
Reynolds Aluminum Supply of Calif	X	X	X								
WISCONSIN											
MILWAUKEE											
Ampco Metal Inc	X	X	X	X	X	X	X			X	X
A M Castle & Co	X	X									
Anaconda American Brass Co		X	X	X		X	X		X	X	
Chase Metals, Service Div	X	X	X	X	X	X	X	X	X	X	X
Fullerton Metals Co	X	X	X	X	X		X	X	X	X	
Steel Sales	X	X	X	X	X	X	X	X			X
CANADA											
ALBERTA											
CALGARY											
Northwestern Brass Ltd	X	X	X	X	X	X	X		X	X	
Wilkinson Co, Ltd	X	X	X	X	X						
EDMONTON											
Wilkinson Co, Ltd	X	X	X	X	X						
MANITOBA											
WINNIPEG											
Northwestern Brass Ltd	X	X	X	X	X	X	X		X	X	
Winnipeg Brass Ltd	X	X	X	X	X	X	X		X	X	
BRITISH COLUMBIA											
VANCOUVER											
Wilkinson Co, Ltd	X	X	X	X	X						
ONTARIO											
ST CATHERINES											
St Catherines Brass Works, Ltd	X	X			X						
TORONTO											
Peckover's, Ltd	X	X	X	X						X	
QUEBEC											
MONTREAL											
Montreal Bronze Ltd	X	X	X	X	X	X	X		X	X	
Peckover's, Ltd	X	X	X	X						X	

How Freedom Fared in 1961

(*Continued from page* 1)

would be more accurate to say, stumbled upon by man. But to my mind an even more transcendent virtue is that, by its nature and dispersion of power, it blocks that absolute power which Lord Acton, in his famous dictum, remarked, "corrupts absolutely."

So when it is charged that a national political administration is hostile to business it is tantamount to charging that it is undermining the foundations of freedom. And I don't see how any committee charged with striking a balance sheet on how freedom has been faring can properly avoid the issue that is raised.

There is an interesting line of analysis which leads to the conclusion that it is axiomatic that the Kennedy Administration is antibusiness. And, interestingly enough, it was developed by an eminent economist, the late Joseph A. Schumpeter, who ended his remarkably broad and diverse career as a professor at President Kennedy's Alma Mater, Harvard University.

Saw Dim Future for Capitalism

In his study of "Capitalism, Socialism and Democracy," first published 20 years ago but still fascinating reading, Professor Schumpeter envisaged a dim future for capitalism. (If his name had not had so many syllables that it wouldn't fit headlines comfortably, his notions might have acquired some of the unpopularity of the ideas advanced by the handy headline fitting J. M. Keynes.)

One of the key reasons that Professor Schumpeter assigned for the poor prospects of capitalism which, for most practical purposes is synonymous with the business system, is that Intellectuals don't like it. Although, as he remarks, they are largely untouched by first-hand knowledge of how the system actually works, they hold it in moral contempt, and in one way and another are steadily at work creating unrest and undermining its institutional foundations. And nothing can be done to quell them because that would be denial of the freedom of action and expression which is one of the institutional pillars of the business system in this country.

Administration Juxtaposition

If Professor Schumpeter's analysis is valid, then the Kennedy Administration is broadly suspect of being antibusiness. For to a degree perhaps even exceeding that of the early years of the New Deal, it has filled key posts in Washington with those who would be and who would wish to be classified as Intellectuals, among them a large contingent of college professors who, on the contemporary scene, are the Intellectuals par excellence.

On the contrary, however, the President himself argues with convincing force that it would be stupidly suicidal for his Administration to be antibusiness. In his talk to the National Assn. of Manufacturers, in which, among other remarkable things he made statistics about as eloquent as they can be made, he cogently pointed out that to succeed in all of our national and his political aims "we must make the system work, and the business community must prosper."

The President's purpose to have the business system prosper does not, of course, dispose of the possibility that some of what have become the vast bureaucratic reaches of his Administration are definitely antibusiness, under the prodding of Intellectuals. About this I am well supplied with what might be characterized as rumor and gossip but very short on first hand information. I have plans to be better supplied with the latter later.

On the broad question of whether there is, as Professor Schumpeter contended, a basic antipathy between Intellectuals and the capitalistic or business system I am not without impressions based upon first hand observation. I have spent a good many years in the Intellectual camp, both as a professor and college administrator, and a good many years as an operative in the business system.

Later in this series of observations I'll report my personal findings as to whether the professors would, if they could, do in the business system. In the meantime, a Happy New Year to Freedom House for its around the world checkup on freedom in 1961, with a complaint registered that it neglected or ducked one key part of its problem—the issue of the attitude of the Kennedy Administration toward business, the key bulwark of our freedom.

And a Happy New Year to all the rest of you, too.

Meetings You May Want to Attend

NEW LISTINGS

American Transportation Research Forum—2nd Annual Meeting, Hotel Commodore, New York City, Dec. 27-29.

7th Annual Materials Handling and Packaging Conference—Stanford University, Palo Alto, Calif., March 29.

Business Equipment Exposition—McCormick Place, Chicago, April 9-13.

PREVIOUSLY LISTED

DECEMBER

American Marketing Association—Annual Winter Conference, Biltmore Hotel, New York City, Dec. 27-29.

JANUARY

Automotive Engineering Congress and Exposition—Cobo Hall, Detroit, January 8-12.

2nd Annual Conference on Containerization and Packaging—Skytop Room, Statler Hilton Hotel, New York City, Jan. 18.

Southern Industrial Distributors' Association—Annual Midyear Meeting, Shamrock Hotel, Houston, Tex., Jan. 21-23.

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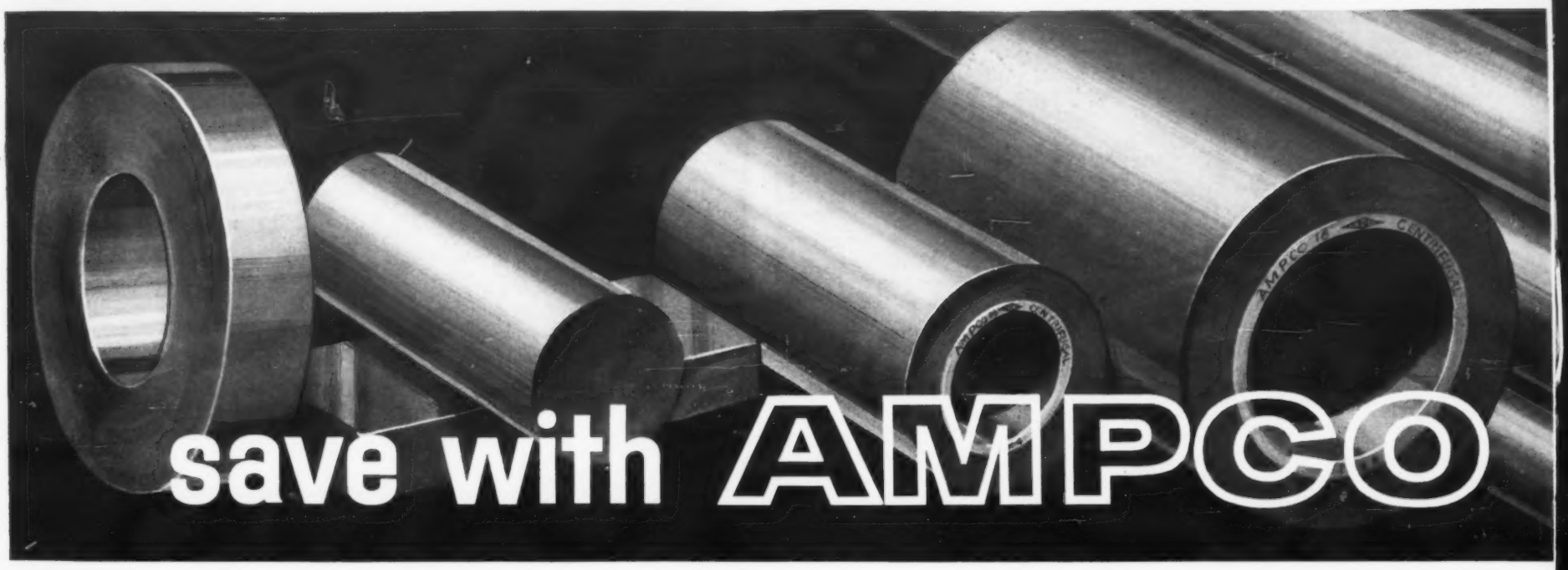

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AMPCO® 18 EXTRUDED SOLID ROUNDS . . . Available in 50 diameters, ranging from ¼" to 5¼", in random mill lengths, or cut to any length specified. AMPCO 18 is a service-proven long-wearing alloy for general uses in production and maintenance applications.

AMPCO 18 CENTRIFUGALLY CAST BARS . . . semi-finish machined all over, in standard 12½" lengths. Available in 16 inside diameters from 1¼" to 8", and 40 outside diameters from 1¾" to 10".

AMPCO 18 and 21 EXTRUDED RECTANGLES . . . Supplied in mill lengths, or cut to requirements. Each is available in 74 sizes, from ¼" x 1" to 3" x 3". These are hard alloys possessing high elastic limits and ultimates in compression, ideal for wear-plate service.

AMPCO® 8 ROLLED SHEET & PLATE . . . are furnished in 1/ 32" to 3½" thicknesses in 28 stock sizes or cut to your specifications. Combining toughness and ductility, Ampco sheet and plate is used for wear strips, slides, etc.

AMPCO DiBronze® & AMPCO 24 STOCK DIE BLANKS . . . Available as solid rounds, rectangles, and centrifugally cast rings, in a wide range of sizes. These alloys are hard and tough. Developed for extended die life, DiBronze has improved resistance to impact, does not require heat-treatment and is readily machined. Both offer non-galling, non-loading, non-scratching performance on jobs where continuous production with minimum finishing is desired. Your Ampco Distributor can supply the size best suited to your need.

Get quick deliveries on

ALASKAN COPPER AND BRASS COMPANY
3223 Sixth South • Seattle 24, Washington
MAin 3-5800
939 S. E. Alser Street • Portland 14, Oregon
BElmont 6-2121

CANADIAN BRONZE COMPANY, LTD.
999 Delorimier Ave. • Montreal 24, Que., Can.
LAfontaine 4-1131

MONTREAL BRONZE, LTD.
999 Delorimier Avenue • Montreal 24, Que., Can.
LAfontaine 4-1131

NORTHWESTERN BRASS, LTD.
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NORTHWESTERN BRASS, LTD.
13 Bury St. • Winnipeg, Manitoba, Can. • SP 4-2466

WINNIPEG BRASS, LTD.
600 Clifton St. • Winnipeg, Man., Can. • SU 3-7164

KELCO METAL PRODUCTS CO.
51 Sleeper Street • Boston, Massachusetts
Tel.: HUbbard 2-1737 • Worcester: PLeasant 3-7625

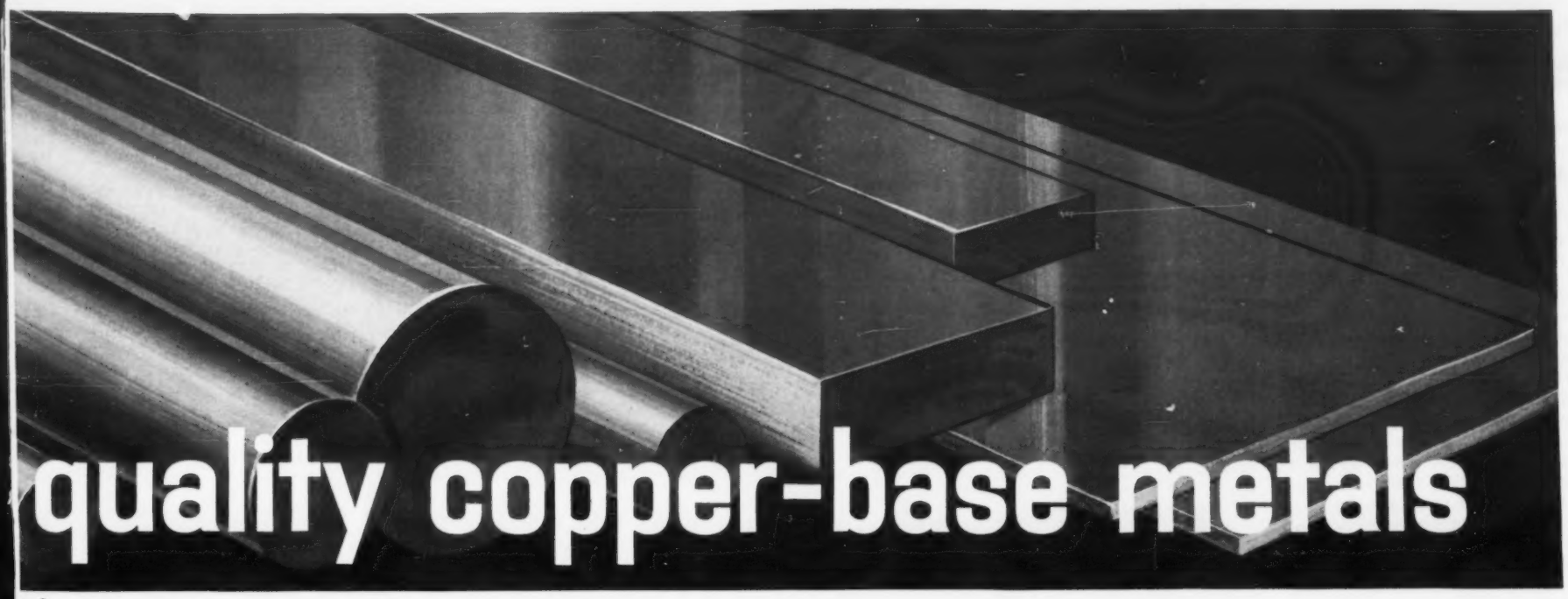
NEW ENGLAND STATES
SHEET • HOLLOW BARS
ROD • RECTANGLES

Meier BRASS & ALUMINUM Company
1471 East Nine Mile Road • Hazel Park, Michigan
JOrdan 6-3902

AMPCO®
AMPCO METAL, INC.
MILWAUKEE 1, WISCONSIN
West Coast Div.: Huntington Park, Calif.
Southwest Div.: Garland (Dallas County), Texas

PHILADELPHIA BRONZE AND BRASS CORP.
22nd and Master Streets
Philadelphia 21, Pennsylvania
POplar 5-2100
Ampco Licensee and Distributor with complete facilities for forging Ampco and other non-ferrous alloys.

RELIABLE CASTINGS CORPORATION
Spring Grove Avenue and Elmira Street
Cincinnati 23, Ohio • KIrby 1-2627
Aluminum • Brass • Bronze • AMPCO
Aluminum Bronze • Sand Castings
Castings Made to Any Special Analysis
Complete service from the blueprint to finished casting
Over 40 Years of Progress
AS RELIABLE AS THE NAME IMPLIES! TRY US



AMPCO® alloys through these nearby Ampco Distributors:

THE BEARING BRONZE COMPANY
3515 East 82nd Street
Cleveland 5, Ohio
MIchigan 1-6520
TWX CV-1056

BEARING HEADQUARTERS CO.
Division of Ray M. Ring Co.
25th Avenue at 16th Street
Broadview, Ill. • MUrray 1-4400
1919 Harrison Ave. • Rockford, Ill. • WO 5-0628
107 Greenwood Ave. • Waukegan, Ill. • MA 3-5212
6060 Oakton St. • Morton Grove, Ill. • OR 5-5575
3481 Michigan Ave. • E. Chicago, Ind. • SA 1-8660

BRONZE SPECIALTIES, INC.
1655 Warner Street
Baltimore 30, Maryland
LExington 9-1906

R. B. CAROLIN
Foundry & Machine Company
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TAshmoo 5-1338
- Michigan's Aluminum Bronze Specialists
- Rectangulars Stocked Any Length to 61" (Precision Cast with Grind Stock Allowed, or Finish Ground)
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- Complete Pattern Facilities — 50th Year Michigan's Only Ampco Licensed Foundry

Copper and Brass Sales INC.
6555 East Davison • Detroit 12, Michigan
FOrest 6-6200
1855 Turner, N. W. • Grand Rapids 4, Mich.
EMpire 1-6681
5755 Grant Avenue • Cleveland 5, Ohio
VUlcan 3-8100
333 West First Street • Dayton 2, Ohio
BAldwin 4-9111

FULLERTON Metals Co.
6605 W. Fullerton Ave. • Chicago 35, Ill.
MErrimac 7-2700
Bldg. 33-Foot of Grant Street • Tampa 5, Florida
248-6121
915 West 20th Street • Hialeah, Florida
TUxedo 8-8424

KENCROFT ASSOCIATES, INC.
373 Hertel Avenue
Buffalo 7, New York
TRinity 5-2020

KNAPP FOUNDRY COMPANY, INC.
Guilford, Connecticut
GLendale 3-2744

MEIER BEARING ALLOYS, INC.
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Chicago 8, Illinois
CAlumet 5-8400

NON-FERROUS CASTING COMPANY
736 Albany Street • Dayton 8, Ohio
Phone 228-1162
Brass, Bronze, Aluminum and AMPCO Castings
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691 Exchange Street
Rochester 8, New York
HAmilton 6-1630

WILLIAM M. ORR CO., INC.
No. Braddock Avenue, at Thomas
Pittsburgh 8, Pennsylvania
CH 2-3000
Adequate inventory, plus modern cutting equipment, guarantees prompt warehouse delivery of sheet, plate and rod to your exact specification.

ROCKFORD TOOL AND TRANSMISSION COMPANY
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"WHERE SERVICE EXCELS"
YOUR
ROCKFORD INDUSTRIAL DISTRIBUTOR
MEANS AVAILABILITY—DEPENDABILITY
and SERVICE *NOW!*

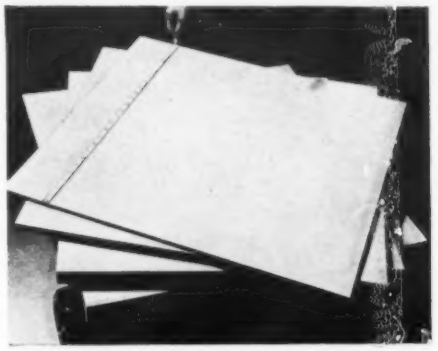
THE ST. CATHARINES BRASS WORKS, LTD.
16 Smith Street
St. Catharines, Ontario, Canada
MUtual 2-9258

VINCENT BRASS AND ALUMINUM COMPANY
124 12th Avenue, South
Minneapolis 15, Minnesota
FEderal 9-7061

Purchasing Week's

Product Perspective

MATERIALS, unlike many component parts, often don't show up in the finished product, but get "eaten up" in the process of production. Nevertheless, they form an essential link in the manufacturing cycle and, as the following 11 materials show, add desired properties to the finished good.



CERAMIC-LIKE INSULATING MATERIAL can withstand high temperatures and has good electrical and chemical properties.

● **Ceramic-like insulating material, previously available only as rod, tubing or custom parts, is now made in sheet form for electrical, chemical, and mechanical applications.** Trademarked Fluorosint, the material has low thermal expansion, excellent high temperature resistance, and outstanding friction and wear characteristics. It maintains many of the basic electrical and chemical properties of TFE fluorocarbon. The sheet can be machined on standard metalworking equipment and comes in sizes from ¼-in. to 4-in. thick in 25½-in. squares. **Potential applications:** bearings, rollers, valve seats, insulators, seals, and washers. *Polymer Corp.*

● **Anionic surface-active agent of the sulfonate type has an unusual oxide linkage of two benzene rings that enables the product to maintain its solubility and surface activity in highly concentrated electrolyte systems.** Benax 2A1 is soluble and stable in 20% solutions of all common acids, bases and salts and is a moderate sudsing agent. **Potential uses:** liquid detergents, all-purpose cleaners, germicide formulations, cotton mercerization solutions. *Dow Chemical Co.*

● **High purity (98%) MgO grain being incorporated in refractories is expected to enable steel makers to run furnaces at much higher temperatures.** Porosity of the new grain is under 7% and the melting point is about 5,000 F. Grain sizing is excellent and mineral crystallinity is well-developed. **Potential uses:** incorporation in a line of basic refractories such as unfired and/or metal encases for steelmaking and special modifications for glass, nonferrous metals and chemical fields. *Harbison-Walker Refractories Co.*

● **High-pressure acetylene-derived chemical intermediates can handle a variety of jobs in pharmaceuticals and foams. Potential uses are:** Dihydrofuran; production of insecticides and pharmaceuticals, polymer and epoxidation reactions. Mercuric pyrrolidone; water soluble against Gram-positive and Gram-negative bacteria for staph control, mildew control of latex systems such as water-based paints. Butynediol bis-hydrox-ethylether; provides necessary hydroxyl groups for production of polyurethanes, polyesters and plasticizers. *General Aniline & Film Corp.*

● **Glass epoxy laminate plastic meets all military and NEMA specifications and is easily punched.** It combines flame retardance with the high mechanical strength and ease of fabrication of MIL Type GEE and the high temperature strength retention of MIL GEB. Trademarked Fireban 1011, the laminate has a lengthwise flexural strength of 80,000 psi for $\frac{1}{16}$-in. thickness and will keep over half its strength at 300 F. It is available in sheet form (37x49-in., .01 to 2-in. thick) and as a copper-clad laminate. **Potential uses:** printed circuit boards, fire retardant, high strength applications. *Taylor Fibre Co.*

● **Aluminum powder made from 99.5% pure metal, consists of small flake shaped castings having a high surface area and a considerable degree of porosity.** Alflake 151 provides a great deal of reactive surface area per unit of weight. **Potential uses:** as reaction material in chemical and catalyst industries, deoxidizer in steel processing, filler in large, resin-base castings. *Aluminum Co. of America.*

● **Methyl carbamate compound produced by a new process is said to be relatively cheaper than limited quantities previously available.** Variety of derivatives will be made in addition to the basic chemical. **Potential uses:** coating aids for textile, paper, metal, leather, glass fibers, intermediates for new stabilizers, quartenaries and blowing agents, preparation of sizings. *Millmaster Chemical Corp.*

● **Fluorine-based material has good mold release or antiblocking properties and is thermally stable and chemically inert.** Vydax AR fluorcarbon telomer dispersion imparts a very slick, dry coating which provides excellent lubrication between surfaces. Tests show the material has no residual effects to interfere with post-finishing operations. It is applied by dipping, brushing, flooding or spraying. **Potential uses:** releasing thermosetting resins such as epoxies, polyesters, silicones and phenolics and thermoplastic resins including neoprene rubber. *E. I. DuPont.*

● **Polyether intermediate has built-in flame resistance and is used for production of flame-laminable urethane foam.** High bond strength is obtained with less loss of thickness than is usual with flame-laminating operations since it won't burn off. Polyether foams made with LF-70 can be made in a variety of colors and on same equipment used for polyester foams. **Potential uses:** Urethane foam for clothing interliner applications. Price is 31¢ lb. in LCL drum lots. *Union Carbide Chemicals Co.*

Here's your weekly guide to . . .

Folding Machine

Folds 150 Sheets/Min.

Table-top folder handles sheet sizes from 4x4 in. to 9x18 in. at 150 sheets per min. It takes bond, duplicating, ledger, book, coated, and uncoated stock which—with attachments—it slits, scores, and perforates. Addition of an automatic electric stapler allows folding and stapling in one pass.

Price: $259. **Delivery:** immediate.

Fairchild Camera & Instrument Corp., 20110 Detroit Rd., Cleveland 16, Ohio. (PW, 12/25/61) SIC #3579

Portable Power Source

Meets Emergency Needs

Portable source of 110-v. a.c., 60 cycles, provides emergency power with the addition of a 12-v. automobile battery to the built-in charger and vibrator inverter. From a charged 55-amp./hr. battery with a 660-w./hr. capacity, 420 w./hr. of a.c. current can be obtained.

Price: $65. **Delivery:** immediate.

Federal Pacific Electric Co., Cornell-Dubilier Electronics Div., Fuquay Springs, N. C. (PW, 12/25/61) SIC #3699

Silicone Rubber Foam

Cures at Room Temperature

Low viscosity fluid cures in 4 to 5 min. at room temperature to a low-density silicone rubber seven times the original volume. It has good electrical properties, is serviceable from −70 to +500 F, and, since the satalyzed fluid pours easily before foaming is completed, it can be put in hard-to-reach areas.

Price: $8/lb. (with catalyst). **Delivery:** immediate.

Dow Corning Corp., Midland, Mich. (PW, 12/25/61) SIC #2822

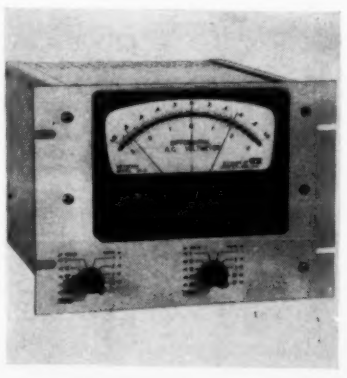
Wire Stripper

Won't Cut Strands

Electric wire stripper removes insulation from wire ends with heat so as not to cut or score strands. It has two heat levels and minor adjustments provide for work on sizes from #6 AWG to #36 AWG. An adjustable wire stop gives uniform stripping lengths up to ¾ in. although longer lengths can be stripped.

Price: $56.50. **Delivery:** immediate.

National Missile & Electronics, Inc., 5307 W. Century Blvd., Los Angeles 45, Calif. (PW, 12/25/61) SIC #3699



Voltmeter

Has Meter-Relay

Differential a.c. voltmeter comes with a controlling meter-relay to determine voltage deviation from a standard and its direction. If deviation is too great, it triggers alarm or control action. Ten voltage ranges go from 0-10 mv. to 300 v., frequency range is 20 cps. to 100 kc., and accuracy is ±2% of full scale.

Price: $495 ($415 with conventional panel meter). **Delivery:** 8 wk.

Assembly Products, Inc., Chesterland, Ohio. (PW, 12/25/61) SIC #3611

New Products

Price data that accompany each product description are list or approximated prices supplied by manufacturers. Unless otherwise noted, prices quoted are for the smallest quantity that can be ordered.

Vacuum Cleaner

Handles Heavy-Duty Jobs

Heavy-duty industrial vacuum cleaner has throw-away filter bags for dust-free dirt disposal. A blower exhaust connection equips the unit to work with air sweepers and other pressure attachments. Besides basic attachments, kits are available also for special cleaning jobs such as on air conditioners.

Price: $159.50 (with basic attachment kit). **Delivery:** immediate.

Mastercraft Industries, Inc., 190 Lanza Ave., Garfield, N. J. (PW, 12/25/61)
SIC #3584

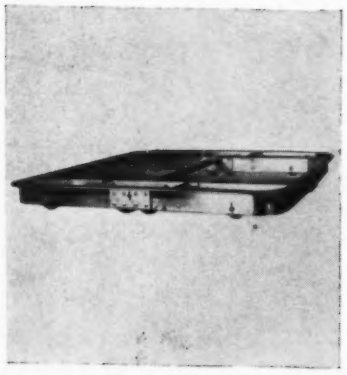
Hand Cleaner

Works Without Water

Waterless hand-cleaner for office use is a combination cleaner and lotion with a lanolin base that can be wiped off after using or washed away if preferred. The liquid is packaged in a plastic squeeze bottle fitted with a spill-proof flip-top locking cap that is designed for safe storage in desks.

Price: $1. **Delivery:** immediate.

Worth Chemical Products, 413 E. Magnolia, Fort Worth, Tex. (PW, 12/25/61)
SIC #2841



Pallet Dolly

Has Tilt, Nontilt Design

Magnesium pallet dollies weighing from 33 to 50 lb. come in 18 models each of tilt and nontilt design. Six sizes ranging from 36 x 36 in. to 48 x 48 in. come in each of three capacities of 1, 1½, and 2 ton. As an option, dollies can be equipped with a loop for insertion of a handle.

Price: $66.50 to $91.50. **Delivery:** 1 to 2 wk.

Brooks & Perkins, Inc., 1950 W. Fort St., Detroit 16, Mich. (PW, 12/25/61)
SIC #3537

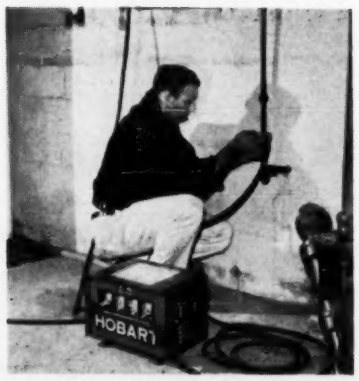
Paper Cutter

Cuts 23-in. Width

Power cutter with push-button controls for cutting and clamping cuts paper stock up to 23 in. wide. Two models include one for normal operation and another with power-operated back gage and automatic spacer for accurate repetitive cutting of closely-spaced work such as labels. A green finish and quiet operation make the units suitable for office use.

Price: $2,450 up. **Delivery:** 30 days.

The Challenge Machinery Co., Grand Haven, Mich. (PW, 12/25/61) SIC #2789



Transformer

Thaws Frozen Pipes

Transformer works off 110 v. or 120 v. a.c. and has four output terminals that provide high, medium, and low steps to thaw frozen pipes. The portable, 63-lb. unit is complete with 10-ft. cable with plug and receptacle and 20-ft. thawing cables with lugs and pipe clamps. The case measures 16⅜x11½x10⅜ in.

Price: $119.50. **Delivery:** immediate.

Hobart Bros. Co., Troy, Ohio. (PW, 12/25/61)
SIC #3612

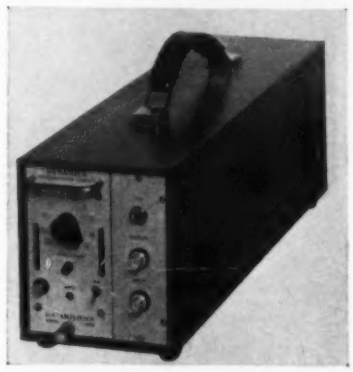
Powdered Vinyl

Gives Uniform Coating

Vinyl coating compound for fluidized bed application coats products in uniform thicknesses over .008 in. The general-purpose material is not intended for uses needing resistance to prolonged weathering or where there are stringent environmental conditions. It is available in a series of standard colors.

Price: 48¢/lb. (in quantity). **Delivery:** 7 to 10 days.

The Polymer Corp., 2120 Fairmont Ave., Reading, Pa. (PW, 12/25/61) SIC #2821



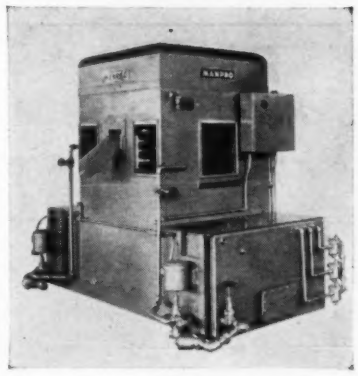
D.C. Amplifier

Drives Galvanometers

Transistorized, chopper stabilized, d.c. amplifier is designed primarily for strain-gage amplification. The unit, with a 0-3 kc. bandwidth and ±10-v. to ±100-ma. output, is suitable for driving high frequency galvanometers and magnetic tape recorders. Gain range is .1 v. to 1,000 v., continuously variable between steps.

Price: $685. **Delivery:** 30 days.

Dynamics Instrumentation Co., 583 Monterey Pass Rd., Monterey Park, Calif. (PW, 12/25/61) SIC #3679



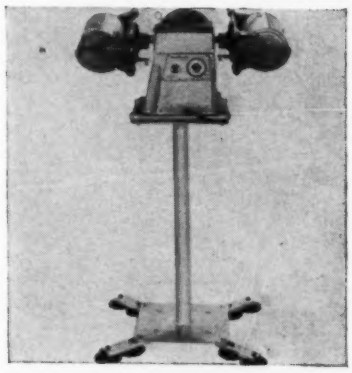
Vibrating Washer

Processes 12,000 lb./hr.

Vibratory washer for automatic in-line processing of small parts washes, rinses, and dries on a continuous production basis. It operates at production rates of from 1,000 lb./hr. to 12,000 lb./hr., moving parts over 50 ft. within the unit before discharging them through an unloading chute.

Price: from approx. $3,000. **Delivery:** 8 to 10 wk.

Manpro Corp., 26000 Capitol Ave., Detroit 39, Mich. (PW, 12/25/61)
SIC #3999



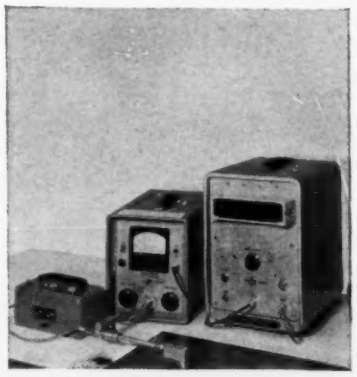
Paint Conditioner

Cuts Mixing Time

Paint conditioner with horizontal can clamps produces perfect color blending and cuts mixing time. The double-capacity unit is designed to hold one gal., two qt., or three pints on either or both sides without adapters. The horizontal angle and three-way vibrating action is said to double mixing efficiency over that of other angles.

Price: $217.50. **Delivery:** immediate.

Red Devil Tools, Union, N. J. (PW, 12/25/61)
SIC #3699



Inspection System

Measures Surface Texture

Systems which provides readings of average roughness heights on machined and ground surfaces permits accurate counting of surface irregularity peaks above a preset level. The information obtained is useful for proper application of finish coatings and can be recorded with an auxiliary instrument.

Price: $2,580. **Delivery:** 1 mo.

Micrometrical Mfg. Co., 3621 S. State Rd., Ann Arbor, Mich. (PW, 12/25/61)
SIC #3821

Hole Gage

Makes Three Checks

Gage for deep or long hole applications checks undersize, in size, or oversize conditions with one insertion. Two models (1 in. to 2 in. and 2 in. to 4 in.) link checking head and operating handle with twin actuator bars. After insertion, movement of the handle operates the bars that actuate the head. Linkage bars come in 12-, 18-, and 24-in. lengths.

Price: $69.50. **Delivery:** immediate.

Southern Gage Co., Erin, Tenn. (PW 12/25/61) **SIC #3821**

Liquid Vinyl

Forms Tough Finish

Liquid vinyl dries in 30 min. to form a watertight coating resistant to temperatures from freezing to 250 F. The coating is nontoxic and resists mildew, acid, salt, etc. It can be used as a masking agent and is easily removed by a solvent.

Price: $8.95/½ gal. (with 1 pt. of solvent). **Delivery:** immediate.

A. L. Okun Co., Inc., 109-02 Van Wyck Expwy., Jamaica 20, N. Y. (PW, 12/25/61) **SIC #2851**

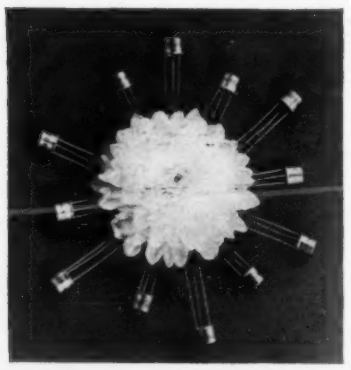
Facilities Timer

Has Three Circuits

Automatic facilities timer, designed to control heating, ventilating, lighting, air conditioning, and electrical signs or electrically operated doors, starts or stops almost any device operated by 115 v. a.c. The unit has three circuits which each carry a load of 15 amp. up to 460 v. a.c., 2 hp. 230 v. a.c. When controlled from a central time system, the timer can operate seven different devices in sequence.

Price: approx. $165. **Delivery:** immediate.

Cincinnati Time Recorder Co., 1733 Central Ave., Cincinnati 14, Ohio. (PW, 12/25/61) **SIC #3622**



Silicon Transistor

Has Epitaxial Layer

Planar, epitaxial, passivated silicon transistors for high speed switching and high frequency amplifier circuits operate at frequencies from 50 mc. to above 120 mc. The units, types 2N2193 through 2N2195 and 2N2193A through 2N2195A, offer low saturation voltage, low collector capacitance, and low leakage current over an operational range of −65 C to +200 C. With a case temperature of 25 C they are capable of dissipating 2.8 w.

Price: $3.50 to $13.75/each (quantities of 100 to 999). **Delivery:** immediate.

General Electric Co., Kelley Bldg., Liverpool, N. Y. (PW, 12/25/61) **SIC #3679**

Purchasing Week Definition

Laminates

Laminate—A product that is formed by the combination of two or more layers of materials bonded together with an adhesive. Used as a verb, the word refers to the act of bonding the layers together.

Cross Laminate—A formation of layers that have been bonded so that some of the layers are oriented at right angles to other layers with regard to the direction of their grain or tensile strength.

Parallel Laminate—A formation of layers all oriented approximately in the same direction.

Laminant—An adhesive that has been designed for use in the bonding together of a combination of sheets, films, foils, papers, or other materials in sheet or web form.

Lamination—The process of plying layers together and bonding them.

Delamination—Separation or splitting between the layers of materials in a laminated product. This generally is caused by lack of proper adhesion between the layers. **(PW, 12/25/61)**

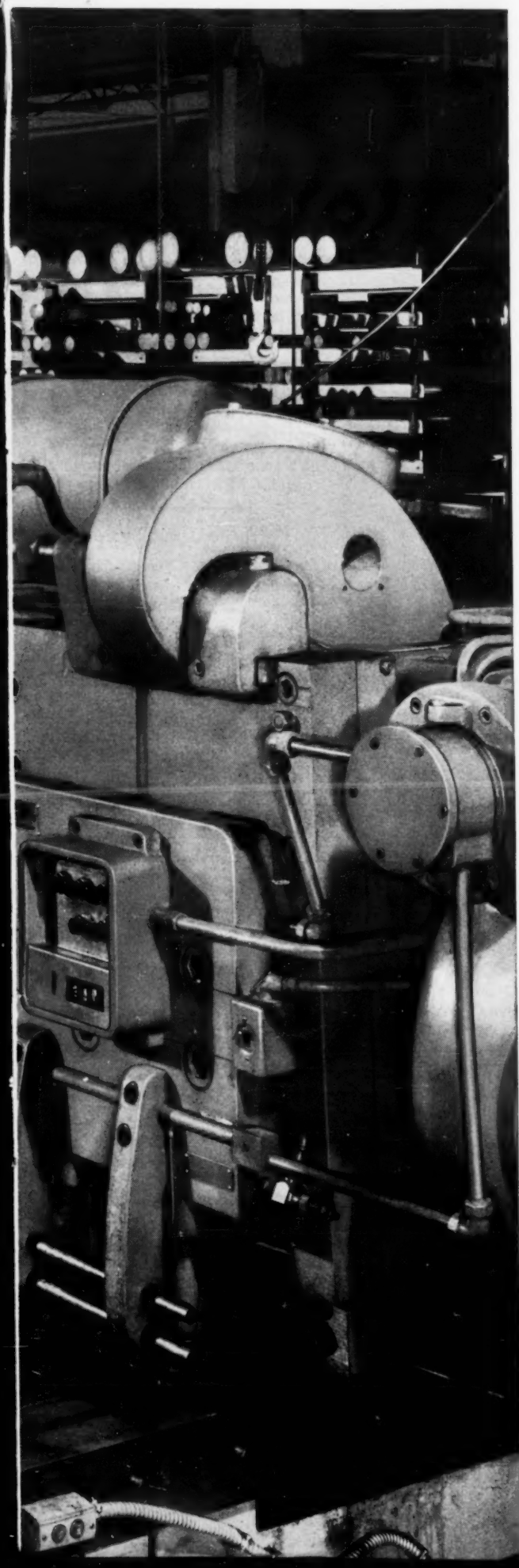
Location Marker

Spots Fire Alarms

Self-adhesive location marker points out fire extinguishers and fire alarm boxes. The signs are printed on metal or in brilliant red on white plastic sheets. Fire extinguisher signs are about 9 x 13 in. and fire alarm signs are about 13 x 18 in.

Price: $1.50 to $2.50. **Delivery:** 7 to 10 days.

National Marker Corp., 219 Wampanoag Trail, Riverside 15, R. I. (PW, 12/25/61) SIC #3993



YOUR STEEL SERVICE CENTER

. . . service is their middle name!

Modern Steel Service Centers are a great deal more than materials distribution centers. Look upon them as a profit-building extension of your own operations.

Pre-delivery processing, for example, is commonly offered . . . virtually anything needed to prepare material for production (and save you time and money).

Then, there's inventory planning and control. Anticipating material requirements for even *one* plant isn't easy . . . but your Steel Service Center does it for dozens. Successfully, too, and same-day delivery is a matter of pride as well as service.

(Another important matter—up to the time it's delivered, the material hasn't cost you a penny. No storage, no cost accounting, no insurance, no taxes on dormant inventory . . . and you don't have to commit yourself to carload or mill run purchases.) Your Steel Service Center offering Republic products also offers Republic metallurgical assistance.

When you need Republic steel in a hurry—whether it's a little or a lot—call on your Steel Service Center. You'll find that *service* really is their middle name!

SOME OF THE MANY REPUBLIC STEEL PRODUCTS . . .	In steel: carbon, alloy, stainless, high strength; sheets, strip, bars, plates, pipe, tubing, wire, rods.
AND PRE-PROCESSING SERVICES OFFERED BY YOUR STEEL SERVICE CENTER . . .	Cutting, shearing, flame-cutting, sawing, sheet flattening, and grinding.

REPUBLIC STEEL

REPUBLIC STEEL

Cleveland 1, Ohio

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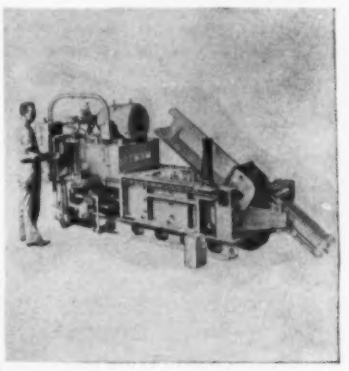
Steel Strong, Modern, Dependable

STEEL SERVICE CENTER INSTITUTE



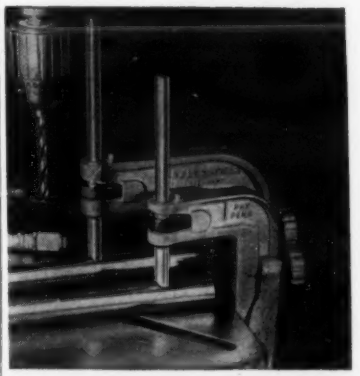
Scrap Metal Baler

Gives Triple Compression

Baling press for nonferrous metals and light steel clippings adds a tramper cover to two rams that exerts a 28-ton force on scrap loaded in and above the baler box. The press can produce bales of approx. 5 x 12 x 5 in. or 6 x 12 x 6 in. in a 50-sec. cycle and has a large discharge opening to prevent oversize bales from sticking or jamming. The self-contained unit can readily be lifted or skidded to a new baling site.

Price: approx. $12,400. **Delivery:** 6 to 8 wk.

Galland-Henning Mfg. Co., Milwaukee 46, Wis. (PW, 12/25/61) SIC #3569



Deep-Throat Clamp

Leaves Workpiece Accessible

Aluminum clamp provides maximum accessibility to workpiece at point of pinning since throat depth approximates clamp height. The quick opening and quick closing clamp is available with threadless anvil or vee spindles of carbon or stainless steel. The spindle readily slides to and locks on the piece to be pinned without frame distortion or the spindles turning which could mar the work.

Price: $15.95 to $27.95. **Delivery:** 1 wk. to 10 days.

United Associates, 1605 N. Hercules Ave., Clearwater, Fla. (PW, 12/25/61) SIC #3429

Product News in Brief

Modern Power Line

New Orleans — Louisiana Power & Light Co. of New Orleans has installed a "streamlined" electric power line designed to meet the aesthetic needs of suburban areas.

The lightweight transmission towers of Olin aluminum extrusions are styled for simplicity and need only 2 sq. ft. as a base for their 85-ft. height. The aluminum conductor cable is made of 36 aluminum strands reinforced with one steel strand. Drawforming then compresses the strands so that the cable has a dia. about 10% less than others of the same capacity.

The recently installed transmission line extends about 3½ mi. and is built to withstand hurricane winds of 140 mph. The line's rating is 115,000 v. but minor modifications can bring it up to 230,000 to meet increasing power needs.

Economy Tape System

Minneapolis—The Electronic Data Processing Div. of Minneapolis-Honeywell is offering an optional, economy tape drive for use with the Honeywell 400 system. The $450 monthly rental is half that of standard magnetic tape transports. Purchase cost is $20,250.

"The new tape systems provide a new level of economy for users who do not require the high transfer rates available with standard tape drives," said Walter W. Finke, division president. The optional drives can transfer data to and from magnetic tapes at up to 32,000 alpha-numeric characters or 48,000 decimal digits per sec.

Honeywell 400s will now be available with one to eight standard or economy tape mechanisms, each of which writes tapes compatible with both systems. With the economy mechanism, monthly rentals for the 400 range from $4,960 to more than $10,000.

Lawn Mower-Snow Plow

Huntington, N. Y.—Heavy-duty tractor available from Snomower, Inc., is available with snow-throwing attachment that is interchangeable with a lawn mower for year-round service.

The snow removal unit combines with a front-mounted hydraulic motor of high torque for

greater front-wheel traction and maneuverability of the rear steering wheels. Hydraulic controls located at the driver's seat provide for easy change of direction so that snow can be thrown either to right or left.

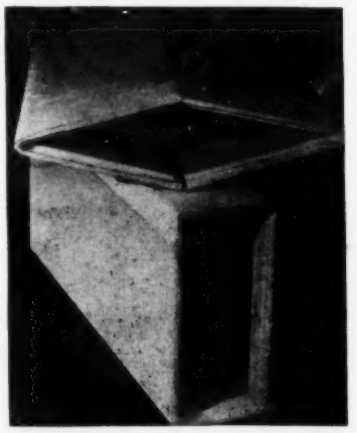
The tractor comes with the snow removal attachment and a choice of a rotary or gang mower attachment at a price ranging from $5,880 to $6,510.

Versatile Duct System

New York—Owens-Corning has announced a duct system for heating and air-conditioning that combines air duct, thermal insulation, acoustical liner, and vapor barrier in one unit. Most sizes need no metal connectors.

The duct has high density Fiberglas insulation with a laminate jacket of embossed kraft paper and aluminum foil reinforced with Fiberglas yarns. For commercial applications, duct has a vinyl surface.

Preformed rectangular and round forms are available as well



as flat boards which can be fabricated into duct components. The system can be used at temperatures up to 250 F. and velocities of 1,500 fpm. and comes in a wide size range.

Rectangular ducts come in 4-ft. lengths with inside dimensions ranging from 8 x 8 in. to 24 x 8 in. Round, 6-ft. long ducts range from 4- to 18-in. inside diameters, and flat duct boards go from 24 in. to 120-in. long in 48-in. widths.

A TIGHT FIT—This plant, in the baby wear division, is P. H. Hanes Knitting Company's plant at Galax, Virginia and is the largest of four recently built plants. Most of their production, the manufacture of infants' and babies' underwear and apparel, is shipped by trailer truck throughout the country. Truck seal bumpers, as seen above, have been installed to provide almost air-tight seals between trucks and the loading platform. They are made from a solid compressive material that has been covered with canvas and bolted around the loading platform openings. The trucks back onto leveling platforms which raise or lower the level of the truck floor with that of the loading platform. Trucks are backed tightly into these compressive bumpers which then compress to seal off the truck with the loading platform. Bumpers are 12 x 12 and covered with #8 duck. Covers were made for Hanes by the Dize Tent & Awning Co. from Mount Vernon duck.

This is another example of how fabrics made by Mount Vernon Mills, Inc., and the industries they serve, are serving America. Mount Vernon engineers and its laboratory facilities are available to help you in the development of any new fabric or in the application of those already available.

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First Semester Pro-D Report Cards Coming In

(*Continued from page* 1)
chairmen who have been coordinating local Pro-D committees, local associations have taken giant steps toward the goals set earlier in the year at the national level.

"I feel that from the reports I've been getting, we are beginning to see the results of our September Pro-D workshop. Some locals have taken on very progressive programs since then," says John J. Tierney, Jr., of Louisville, Dist. 7 Pro-D chairman.

Basic Purchasing

Most popular subject in local programs, say the district chairmen, is basic purchasing. T. R. Thompson, Dist. 6 (Ohio-Western Pa.) chairman, lists blanket purchase orders, follow up and expediting purchase orders, commodity subjects, interviewing, cost reduction programs, value analysis, and traveling requisitions as the most popular subjects in his district.

Ethics and legal problems in purchasing also are getting a big play. Some locals also are strong on materials management.

It's apparent, too, that the associations are adding a heavy amount of local color to their Pro-D programs. Working with the broad outline of objectives and the projects put out by the national organization, the "grass roots" committees have woven in regional characteristics.

For example, governmental purchasing is a leading subject for the Washington, D. C., Assn. In the Midwest, a seminar on the St. Lawrence Seaway was well received.

In New England, an electronics buyers' group was organized as a direct outgrowth of Pro-D projects which were related to the electronics industry. On the West Coast, defense procurement subjects have been emphasized in the missile and space-minded California locals.

Local Initiative

Both the national organization and the district chairmen feel that the freedom to apply local initiative and ingenuity in organizing programs, seminars, and contacts with schools is a good thing. These observers believe that this freedom stimulates more active participation and lets each member gauge his own educational needs and limitations.

NAPA Administrative Asst. Marshall G. Edwards feels that on the whole the Pro-D program is going very well, despite the inability of some locals to cover all the national's projects."Some of our projects are not at the point yet to tell what the final outcome will be, but indications are good," he states.

Problems

There are problems plaguing every district, however, and one of them has to do with the program content. As Dist. 3 Chairman John D. Wright explains, "They seem to keep wanting to go back to the basics, and what worries some of us is that about 20% of our district membership has conquered the basics, another 20% to 40% are well on their way, and the balance have a lot to learn yet."

Also, there is still a nagging variation in quality of programs among the local associations. These variations boil down to four basic problems:

• **Size**—The small locals have trouble rounding up the manpower to keep up with the pace set by the large associations.

• **Age**—The newer locals are at a disadvantage in establishing contacts with outside speakers and schools.

• **Geography**—The variation in the area a local covers also has influenced the turnout and effectiveness of the programs. But geography can work to an advantage too. Chairman Reuben W. Schackerman points out that in the case of the Lehigh Valley Assn. and the Reading Assn., overlapping of area allowed them to collaborate on organizing one seminar for both groups.

• **Personnel** — Experience of the local Pro-D chairman has seen a factor in program effectiveness. Chairman William Heubach attributes a large portion of Pro-D success in the New York area to the fact that most of his local chairmen have had two or three years' experience in Pro-D.

One district Pro-D chairman's summation of the first four months describes the general feeling:

"We've talked for a long time about education and now we're starting to prove that we meant what we promised. With the NAPA's Pro-D budget, we put our money where our mouth is," he observes.

Foreign Steel Eyeing U.S. Markets As Industry Negotiations Draw Near

(*Continued from page* 1)
foreign producers can be expected to really hustle for orders. A definite decline in European home demand, plus the prospect of a similar decline in Japan once the government's new tight money policies take effect, means the foreign mills must export more to keep current operating rates.

"In the first place, except for a few items, foreign steel just isn't cheap enough," he said. "Secondly, barring a large increase in buying, domestic mills should have enough capacity so that there won't be acute shortages."

Consensus of those interviewed is that the amount of incoming shipments has increased slightly, but that there will be no spectacular increase unless it becomes certain that there is going to be a strike in the U. S.

This is borne out by figures from the European Steel and Coal Community which indicate a pickup in export orders. Total orders for November were about 10% under the same month last year, but export orders were 7% higher. Industry spokesmen attribute this contradiction almost exclusively to increasing orders from U. S. steel buyers, although statistics aren't yet available to back up this contention.

While they need the business, it appears unlikely that the foreign producers will resort to price cutting to get it. In Europe, for instance, producers say world prices already are 15% to 25% below what could be considered reasonable. They feel that if the increase in U. S. demand has any effect on prices, it will be to firm them and perhaps start an upturn.

A spokesman for one New York warehouser, who provides space for many importers in the area, said, "We've already begun to feel the increase in volume, particularly on shipments of bars, bar-sized angles, structurals, sheet, and plate. Most of the shipments are coming from Germany, Belgium, Japan, and South Africa." He thinks the volume will continue to rise during the next six months.

Most other dealers are less definite. A large New York importer admits there has been a "reawakening of interest" in foreign-made products, wire and structurals. European structurals now are selling for about 10% less than U. S. products, including extras, duty, and delivery costs. European wire prices range from 20% to 25% under U. S.

On the other end of the spectrum, an official for an upper New York State service center said flatly that the wave of buying here won't have much effect on foreign imports.

Steel Supply Outlook at a Glance*

Cold-Rolled Sheet—Orders and inquiries "snowing" under some producers. One Pittsburgh mill says buyers' notices of intention equal 100% of first half capacity. Other mills report books near filled through February. Other mills estimate 45 days about average lead time now.

Hot-Rolled Sheet—Order books filling through February although some mills last week still had a few holes for latecomers. Four- to six-week lead-time about average.

Galvanized Sheet — Demand brisk with some producers nearing capacity. Some February orders still may be possible although lead times nearing eight weeks at some mills.

Standard Plate — Orders running about normal, but some mills expect mid-January order increase.

Bars and Standard Shapes—Ordering for bars and tube rounds varying by region, but delivery extending somewhat in areas where automakers showing demand. Shapes in good supply.

Pipe and Tubing—Supply good although some ordering a bit higher than seasonal. Some distant deliveries scheduled.

Wire & Wire Products—Business looking up a bit, but orders still generally off. Expect stainless wire lead times to spread as January requests come in.

Heavy Plate—Generally easy with 30-day plus lead times.

Stainless Strip—Auto demand driving output to maximum, but ordering varies widely between producers.

Bright Stainless — January orders strong, one producer sold out. Talk of quotas to be set next year.

Stainless Bars—Orders increasing but not heavy yet.

Specialties — Tubing specialties up. Government buying steady. One firm reports a July order already on books.

Tool Steels—Orders up 10% some mills. A 10% rise seen each month next quarter. Producers believe ordering more orderly than in 1959.

* **Compiled from mill reports at Pittsburgh, Cleveland, Chicago.**

Late News in Brief

IBM Boosts Electric Typewriter Prices

New York—International Business Machines, the nation's largest manufacturer of electric typewriters, is hiking prices because of rising costs. The price of the IBM standard model will be boosted from $445 to $460, the price of the new Selectric from $395 to $435.

Douglas Awarded Saturn Contract

Washington—Douglas Aircraft Co. has been awarded the contract to build the third stage of the Saturn rocket to carry the three-man Apollo spacecraft around the moon. The National Aeronautics and Space Administration will negotiate the terms of the contract, expected to run more than $50-million.

Probation Period Ended for Electrical Execs

Philadelphia—Probation has ended for 23 executives sentenced in the electrical price-fixing case. Federal Judge J. Cullen Ganey terminated the five-year probations he had fixed last February. He warned the electric company executives they would face much stiffer sentences if they were ever again convicted of antitrust violations.

Postal Rate Hikes Seen

Washington—Postal-rate increases appear to be heading for approval in the next session of Congress, which convenes Jan. 10, if the deadlock between the House and Senate Post Office Committees is settled. Airmail postage would go up to 8¢ and first-class up to 5¢/oz.

Corn Products Cuts Chemical Price

New York—Corn Products Sales Co. cut the price of its alpha D methyl glucoside 3¢/lb. New price of the product, used in making rigid polyurethane foams, is 23¢/lb. in carload lots, 24¢ in truckloads, and 25¢ in LTL lots. Prices are f.o.b. firm's plant in Argo, Ill., packed in 100-lb. bags.

Airline Routes to Be Examined

Washington—A shakeup of airline service between some Southern and Northeastern points may be in store. The Civil Aeronautics Board has ordered a review of existing service with the aim of changing routes to reduce competition. Airlines affected are American, United, Delta, Eastern, and Braniff.

throughout the heart of America's population center enable you to ship goods quickly, efficiently, economically . . . direct between the East and the South — and the Midwest and the South—Mason and Dixon/ Silver Fleet's service is complete. From pick-up to delivery you are worry-free. Modern units depart and arrive on regular schedules, bringing you the finest service of our time.

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SILVER FLEET — Managed by The Mason and Dixon Lines

GENERAL OFFICES: KINGSPORT, TENN.

Borrowing Costs Seen Rising in First Quarter

(*Continued from page* 1)
mand side. Corporations have been financing their needs with internal funds or by borrowing from other corporations through commercial paper (four-to-six-month corporate promissory notes) or bankers acceptances (90-day corporate promissory notes guaranteed by a bank).

"But," he continued, "we figure most firms have just about used up their liquidity, and with the glowing expectations of increased business activity and inventory buildup, the banks are counting on a big surge in commercial loans."

Tilford Gaines, vice-president of the First National Bank of Chicago, also pointed out that corporate tax reserves, which had been an important source of funds over the past few months, would not be available for first half business outlays. The pattern of tax payments during a period of rising profits, he said, is such that September and December requirements leave excess tax monies available for other purposes. But the heavy taxes corporations pay in March and June generally use them up.

Another indication of higher interest charges ahead comes from the rising yields on government securities. Investors expect both short- and long-term rates to move up and so are upping the returns they demand for their money now.

"Expectations have recently been the most important influence on interest rates," Gaines observed. "Many long term investors are keeping liquid because they feel greater returns will be available in the near future." Long-term rates are the key to charges for capital spending.

Most financial experts discount the furor over the hike in interest rates that commercial banks can pay on savings accounts. When the Federal Reserve Board recently raised the legal limit these banks can offer on time and savings deposits from 3% to 4%, many people thought this would artificially raise the interest charges on commercial loans.

"Sure, it raises the expenses banks incur in acquiring money to lend," commented one banking specialist, "but if demand weren't going to support high charges, then the banks couldn't raise interest rates."

However, an expected boost in the rediscount rate can artificially lift interest charges. The rediscount rate (or the Federal Reserve discount rate) is the charge that member banks have to pay for borrowing money from the Federal Reserve. Bank interest rate schedules are pegged, basically, to this charge.

"There has been a lot of talk that the rediscount rate will go up in late January or early February," one top bank executive told PURCHASING WEEK. The reason: A higher interest rate schedule would make domestic investment returns more attractive relative to foreign investment opportunities, and thus dampen the flow of funds, and the consequent outflow of gold going to overseas markets.

Weather Worries Start Cropping Up As Winter Makes Its Official Debut

(*Continued from page* 1)
vides the most extensive single source of local and general continent-wide weather information available in its daily, five-day, and 30-day range forecasts. In periods of unusual weather disturbances, the flow of local and regional weather data is increased to provide almost hourly changes.

But where changes in the weather affect industrial and general business operations, many firms are turning to private meteorlogical services to meet special needs and supplement official government-provided information.

Example

Example: Just a few weeks ago a construction firm working on a coastal area bridge near New York received a telephoned warning from its private consulting service, the International Weather Corp., that a severe storm might move into the area the following night. The advice, tailored to the company's specific needs, came sufficiently ahead of official weather bureau alerts on the same conditions to enable the company to make money-saving preparations it could not have accomplished with routine weather bureau service.

Many customers of private weather forecasting and data firms are advertising and sales departments of retail stores that plan advertising campaigns around weather prospects. Strictly industrial customers use such specialized forecasts and information for transportation preparations and purchasing of food commodities where weather conditions may affect prices.

Cities, highway and turnpike authorities, and other operators of transportation services and facilities utilize private weather services so they can make special snow removal plans—such as alerting crews and making equipment available. Some industrial firms like to receive special reports during heavy weather to provide alerts for possible shutdowns.

What do private weather services provide and how much do they charge?

Depending on the details and frequency of the data needed you can spend as little as $10 for a single local pinpoint forecast to up to $2,000 a week for a five-day type weather reading covering some 50 cities across the country.

You can buy specialized forecasts covering a span of two or three hours or those covering weather prospects for a month to six weeks ahead.

A specialist in the long-range field is Weather Trends, a New York based firm. Weather Trends' clients use its services to plan outdoor maintenance and repairs, the shipping of perishables. Even bakeries rely on Weather Trends to help them decide on when to step up or cut back on production of richer products (sales drop during hot weather).

Costs for this type of tailored service range from $36 a year for a general monthly mailed bulletin to up to $2,000 a year for more detailed studies.

Price Changes for Purchasing Agents

Item & Company	*Amount of Change*	*New Price*	*Reason*
INCREASES			
Farm machinery, Deere, Harvester	2.4%-3%	....	incr. costs
Silver salts, cyanide, 100 oz. bot., oz	.105	$1.0675	metal up
Chloride, 16 oz. bot., oz	.105	$1.26	metal up
Oxide, 1000 oz. drum, oz	.1175	$1.2025	metal up
Dye intermediates, tnker., meta-toluidine, lb	.06	.90	good demand
N-ethyl-m-toluidine, lb	.09	.96	good demand
N-N-diethyl-m-toluidine, lb	.09	.95	good demand
No. 1 and No. 2 fuel oil, M.W. ref., gal	.005	.105 & .9075	seasonal
Kerosene & hi grade diesel, M.W. ref., gal	.005	.11	seasonal
Construction equipt., Chain Belt, Koehring	3%-5%	....	incr. costs
Tellerium slab, U. S. Smelt. lb	.50	$5.75	impr. demand
Sugar, industrial, cwt	.20	....	tight supply
5 solvents & chem. intermed., Dow, lb	.005-.03	....	industry trend
Parathion compounds, Jan., trkld., lb	.04	.88	
REDUCTIONS			
Aluminum alloy ingot, indep. smelt., lb	.005	....	competition
Phenolic resins, liq. & solid, Union Carbide, lb	.0075 & .01	....	phenol cut
Methyl glucoside G609, Corn Prod. Sales Co., carld. lb., fob	.03	.23	incr. production
Kerosene & No. 2 oil, Balt. gal	.003	.115 & .105	warm weather
Polyester film (Mylar), 14 types, DuPont, lb	.15-.25	$1.40-$3.50	prod. econs.
Epoxy resins, Epon 815, 820 (Shell) and Araldite 506 (Ciba), trkld., lb	.03	.62 & .65	competition
Azelaic acid, Emery, eld., lb	.01	.36	competition

Purchasing Week's
Purchasing Perspective

(*Continued from page* 1)
In prices, some clear firming already has been indicated (see p. 1). You can expect still more companies and industries to stiffen their stands in price negotiations, but over-all industrial price advances throughout the year still are estimated at a moderate 2% or less. McGraw-Hill economists assess the general outlook this way:

With durable goods output leading the way, over-all factory production is expected to be up by 10% in 1962. But solid gains in productivity will provide an effective drag on prices as well as limiting employment increases to 5% or under.

The cost index of plant maintenance, compiled by McGraw-Hill's *Factory* magazine, held to approximately a 1% increase this year, and a current leveling off suggests factory costs are not likely to zoom sharply next year.

Movements of PURCHASING WEEK's own industrial materials price barometer (see p. 2) indicates relative stability ahead.

• • •

Economists who are predicting virtually unbroken upward zooms to new records in their key indices—GNP, industrial production, consumer income—likewise are forecasting better-than-ever profit performances in 1962. Each industry will be carefully analyzed, but none more closely than steel which as of now has about the brightest first half prospects of any segment of the economy.

Steelmakers have invested about $1-billion a year in capital improvements since World War II. In recent years much of this has been concentrated on modernization and installation of cost-cutting facilities. **And 1962 looks to be the first real test of how this fine new equipment will perform** under a six-month period of what probably will be near-capacity demand.

Among the most interested observers will be steel union negotiators who will be heading into wage negotiations with the industry soon after the end of the first quarter. One of the industry's most astute observers comments that the union certainly will take meticulous note not merely of the profits but also of the diminishing number of manhours it will take to roll out the tremendous tonnage that will be produced and shipped.

Clevite Harris Claims Better Method Of Gauging Rubber Product Quality

(*Continued from page* 1)
which is bonded to a metal insert. A special lubricant permanently sealed between the two permits the tube's rotation on the rubber. The result is the combination of the low friction properties of a lubricated metal bearing with the shock and vibration absorption capabilities of the rubber.

Although initially intended for automotive applications, the method of product specification based on dynamic properties is expected eventually to cover a large portion of rubber/metal component applications in all product fields. These take in machine tool and textile machinery bearing surfaces, farm equipment, and damping pads for many types of machinery.

Results of the Clevite Harris testing methods are recorded in terms of two values: (1) an elastic stiffness of spring rate, and (2) a coefficient of damping. Consisting essentially of a steady rate of resonance test in which rubber samples are vibrated at a given amplitude and with a pre-determined initial compression, the test gives a rapid evaluation of the compound and affords a good indication of how best characteristics will vary under other sets of conditions.

Stiffness specifications based on this method enable the purchasing agent to more closely define and specify the grade and type of compound which he requires for a given product. Accepted industry practice now is to allow for 30% variation in physical properties of finished rubber goods.

Clevite hopes that its method eventually will be incorporated into the new proposed classification system for elastomeric materials sponsored by the SAE-ASTM technical committee on automotive rubber under the American Society of Testing Materials Method D-2000 and the Society of Automotive Engineers proposed specification J-200. Incorporation into these two standards would be expected to go a long way toward the acceptance of industrywide methods and standards.

New Stapling Machine

Chicago—Acme Steel Co. has developed a new stapling machine which it said will reduce the cost of staples by 50%-65%. The machine can close up to 600 corrugated cartons per hour.

By using a 1¼-in. staple, rather than the conventional $\frac{7}{16}$-in. staple, the new wire stitcher reduces the number of staples required to close a carton by approximately 50%.

Acme officials said a firm producing 500 boxes a day would save $375 a year with the new stapler.

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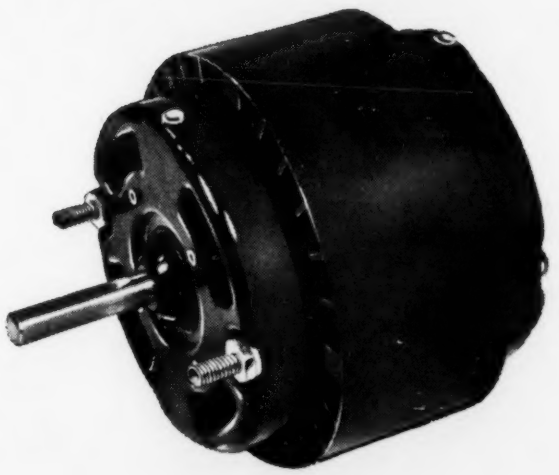

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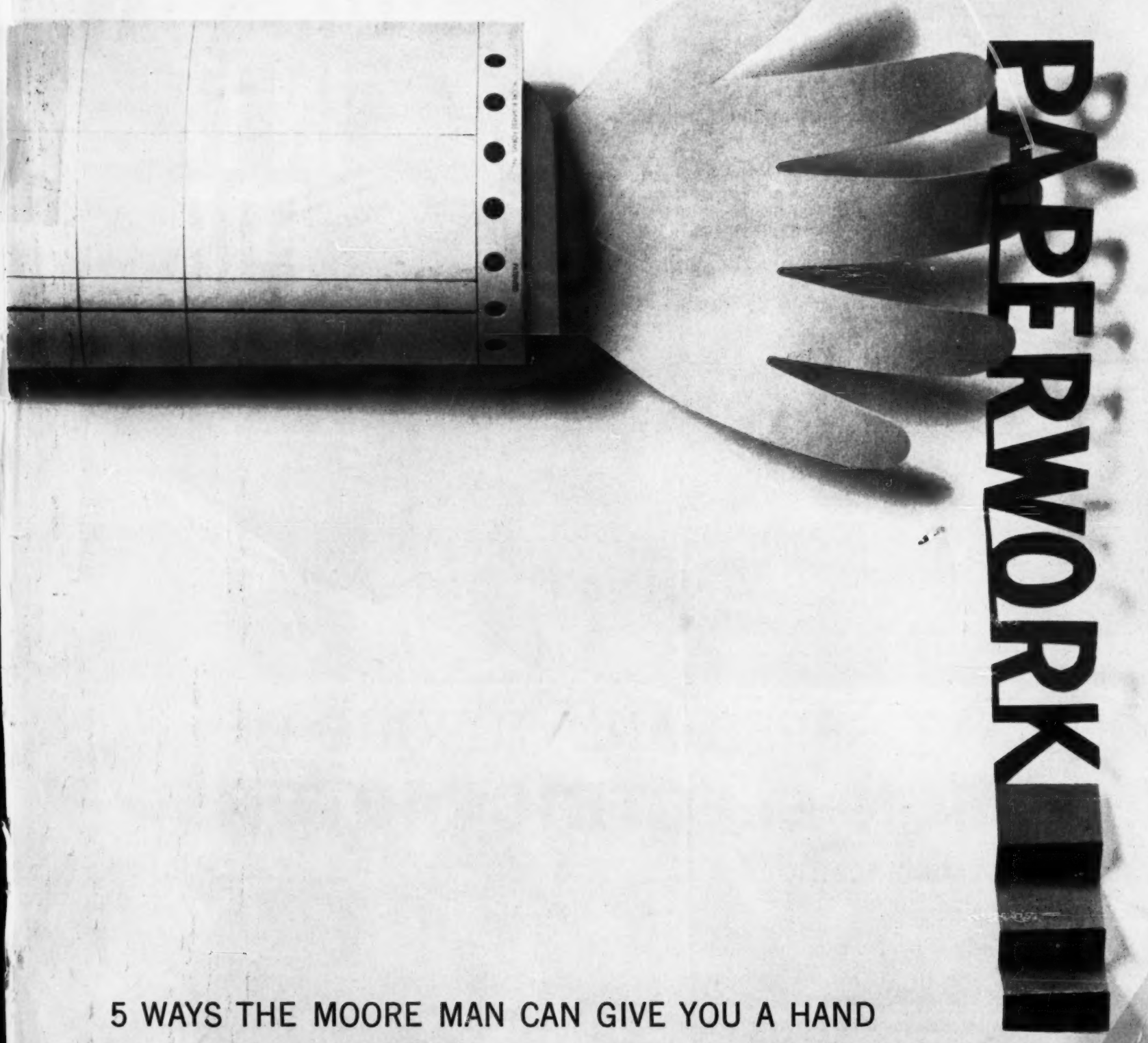

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